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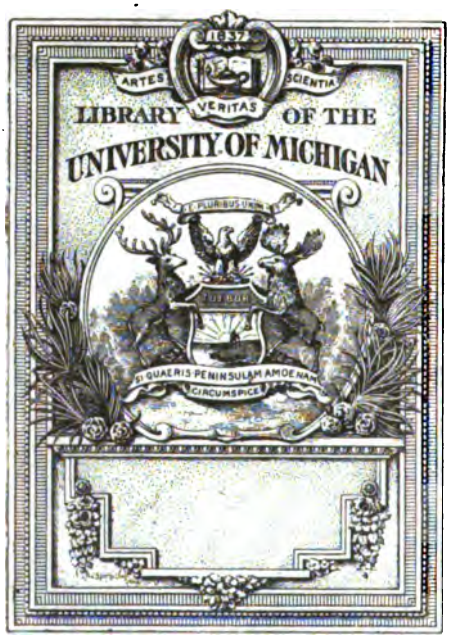
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UNIVERSITY OF IOWA

1896-97

CATALOGUE

OF THE

State University of Iowa

IOWA CITY, IOWA

1896-97

AND

ANNOUNCEMENT FOR 1897-98

PUBLISHED BY THE UNIVERSITY
1897

Calendar for 1897-8.

1897.

June 4, Friday.—Anniversary of Literary Societies, 8 P. M.
Examinations, Collegiate Department, end 12 M.

June 6, Sunday.—Baccalaureate Address, 4 P. M.

June 7, Monday.—Class Day Exercises.
Battalion Drill and Dress Parade, 4 P. M.

June 8, Tuesday.—Alumni Day.
Alumni Meeting, 2 P. M.
Alumni Dinner, 6 P. M.

June 9, Wednesday.—Graduating Exercises, Law Department, 10 A. M.

June 10, Thursday.—Graduating Exercises, Collegiate Department, 10 A. M.

September 14, Tuesday.—Examinations for Admission.

September 15, Wednesday.—Fall Term begins, all Departments.

November 25, Thursday.—Thanksgiving Holiday.

December 23, Thursday.—Fall Term ends.

1898.

January 5, Wednesday.—Winter Term begins.

March 24, Thursday.—Winter Term ends.

March 28, Monday.—Graduating Exercises, Dental Department.

March 29, Tuesday.—Spring Term begins.

March 29, Tuesday.—Graduating Exercises, Homœopathic Medical Department.

March 30, Wednesday.—Graduating Exercises, Medical and Pharmacy Departments.

June 3, Friday.—Anniversary of Literary Societies, 8 P. M.
Examinations, Collegiate Department, end 12 M.

June 5, Sunday.—Baccalaureate Address, 4 P. M.

June 6, Monday.—Class Day Exercises.
Battalion Drill and Dress Parade, 4 P. M.

June 7, Tuesday.—Alumni Day.
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Alumni Dinner, 6 P. M.

June 8, Wednesday.—Graduating Exercises, Law Department, 10 A. M.

June 9, Thursday.—Graduating Exercises, Collegiate Department, 10 A. M.

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Demonstrator in the Dental Department.

FRANK B. JAMES,
Demonstrator in the Dental Department.

JOHN P. MULLIN, M. D.,
Demonstrator of Anatomy.

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Instructor in Latin.

FRED. D. MERRITT, B. S.,
Instructor in Mathematics.

CARL TREIMER, B. PH.,*
Instructor in German.

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*Died March 3, 1897.

CARL SCHLENKER, A. B.,
Instructor in German.

HARRY EUGENE KELLY, B. PH.,
Instructor in English.

DELIA S. HUTCHINSON, B. PH.,
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SAMUEL B. HOSKINS, A. B., M. D.,
House Surgeon in the Homœopathic Hospital.

State University of Iowa.

Organization.

In the year 1840, the Congress of the United States passed an act setting apart two townships for the use and support of a University within the Territory of Iowa, whenever it should become a State. The gift was accepted, as set forth in the Constitution of the State, and the policy re-affirmed in the amended Constitution of 1857. In the latter document it is moreover specifically stated that the "General Assembly shall encourage by all suitable means the promotion of intellectual, scientific, moral, and agricultural improvement."

The first General Assembly took action in regard to the location of the University, and a Board of Trustees was appointed. Very little, however, was accomplished until 1855, when the institution was first opened for the reception of pupils. The University was subsequently re-organized, and under the new organization re-opened on September 19, 1860, and this may fairly be regarded as the date of the beginning of the existing institution.

The control of the University is entrusted to a Board of Regents, consisting of the Governor of the State and the Superintendent of Public Instruction, *ex-officiis*, and one member from each Congressional District, who are elected by the General Assembly.

The University comprises the following departments:

1. COLLEGIATE DEPARTMENT.
2. LAW DEPARTMENT.
3. MEDICAL DEPARTMENT.
4. HOMŒOPATHIC MEDICAL DEPARTMENT.
5. DENTAL DEPARTMENT.
6. PHARMACY DEPARTMENT.

Collegiate Department.

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President.

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ARTHUR BAILEY,
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Assistant in Physics.

General Plan.

The Department embraces four general courses of study,—one Classical, two Philosophical, and one General Scientific; and two technical courses,—Civil Engineering and Electrical Engineering.

By pursuing one or another of the four general courses, and devoting the time left open for elective studies to some one line, it is possible for the student to arrange a course which, besides furnishing the means of a broader culture, will more thoroughly fit him for teaching some particular specialty, or which may enable him to develop his tastes in that particular direction. Thus, for example, a student in the course in General Science may at the same time devote himself especially to chemistry, or physics, or mathematics and astronomy; a student in the Course of Philosophy may also take a special course in ancient or modern language, or in history. The members of the Faculty will always be glad to advise with students on this subject, and will cordially assist them in endeavoring to specialize their work to the best advantage.

Candidates for degrees are required to make an election of one of these courses, and will not be allowed, without permission, to change the elected course, nor to pursue less or more than three studies at a time, except as required by the program.

Students not candidates for graduation, on complying with the terms of admission, will be allowed to select their studies, under the direction of the Faculty.

Persons over twenty-one years of age not candidates for a degree may be admitted to special studies, without examination, at the discretion of the Faculty.

Resident Graduates.—Graduates of this or other institutions desirous of prosecuting studies not included in their undergraduate course may, on consultation with the President, avail themselves of such facilities as the department affords.

Requirements for Admission.

Candidates for admission to the Freshman Class in any of the Collegiate courses must be at least sixteen years of age, and must, by examination or by presenting acceptable certificates, furnish evidence of having completed the preparatory requirements.

No one will be admitted whose deficiencies exceed the equivalent of one study for one year. Candidates having deficiencies not exceeding this limit may be admitted *upon condition that they complete their preparation within the first year after admission.*

It is expected that the following work will be completed in the grammar school: Practical Arithmetic, Reading, Penmanship, Orthography, English Grammar, Geography, Book-keeping (single entry), Physiology (the statutory requirements for primary and grammar schools), United States History (three terms' work), Civil Government (one term's work), Composition (three terms' work), Drawing (three terms' work).

The work in Book-keeping, Composition, Drawing, and Civil Government is not to be considered as absolutely required, but only work in excess of the amount named in this paragraph will receive credit as preparatory work.

CLASSICAL COURSE.

GROUP I.—ANCIENT LANGUAGES.

1. **Latin.** Grammar, Caesar, (four books), Cicero (four orations), Vergil (six books) with Prosody.

Instead of the prescribed Cæsar an equivalent amount of Viri Romae or Nepos will be accepted and is recommended to the preparatory schools. In this case the remainder of the requirements may be offered in Cæsar or Cicero. Other equivalents in kind will be accepted for any part of the specified requirements. *An accurate and ready knowl-*

edge of grammatical forms and construction and a good vocabulary are of essential importance. Sight reading should be taught and practiced from the first.

Exercise in writing Latin, based upon the current reading, ought to be carried through the *entire preparatory course.* An amount equivalent to Collar, Part III. is required for admission.

Four years of daily recitation are needed for the required preparation.

The Roman pronunciation is used in the University.

2. Greek. Grammar, Xenophon's Anabasis. As few high schools meet this requirement the University for the present will provide means for fulfilling it, and an equivalent of three terms' work from Group IV. may be offered.

The preparatory work in Greek should give thorough knowledge of grammatical forms, familiarity with the common rules of syntax and the ability to write simple Greek prose with correct accents. It is not expected that high school pupils under ordinary circumstances will be able, in a single year, to cover thoroughly the work required for admission.

GROUP II.—MATHEMATICS.

3. Algebra. The Algebra of the high school should comprise a careful study of the following topics: signs and symbols; fundamental operations; factoring (including lowest common multiple and highest common divisor; fractions; simple and quadratic equations; theory of exponents (including negative and fractional exponents and radicals); progression. Especial attention should be given to such salient points as the significance of the minus sign, factoring, theory of exponents, equations, and the ability to state readily algebraic problems. The interpretation of algebraic results with the graphical method of their representation should be introduced at the earliest possible stage and constantly insisted upon.

4. Geometry. The "Heuristic" method in beginning the study of geometry is strongly recommended (See Hopkins' Manual of Plane Geometry, D. C. Heath & Co., and Spencer's Inventional Geometry, D. Appleton & Co.)

Whatever method is used the pupil should be provided with adequate drawing instruments and should construct and verify all of his propositions and theorems. Geometric processes and results should be expressed by algebraic symbols whenever possible. Original investigations should not simply be encouraged, but should be insisted upon as a matter of course. The eminently practical side of the study of geometry should not be lost sight of, but the work should be so arranged that it may be of the highest disciplinary value. The language of all geometrical exercises should be exact.

Arithmetic. The work in arithmetic should in general be completed in the grammar grades. At least one term's work in arithmetic may be done with great profit in the high school after the completion of the required work in algebra and geometry. Not only will a general view of the subject be found beneficial in itself but the higher point of view now attainable may be taken advantage of in many ways which it is not necessary to enumerate.

In the high school not less than one-fourth of the time for three years should be devoted to the work in algebra and geometry. It is desirable that the high school work in mathematics be not finished until the end of the course, in order that there may be no break in the continuity of the work between the high school and the University.

GROUP III.—ENGLISH AND HISTORY.

5. English Composition. All applicants for admission whether from accepted schools or not will be examined to test their ability to write clear and correct English. The applicant will be required to write an essay of not less than two hundred words upon a subject chosen by himself from a considerable number set before him. No applicant will be accepted who is deficient in spelling, punctuation sentence and paragraph structure.

The teacher is reminded that the proper preparation for this part of the requirement is constant practice in writing, with careful correction and revision of themes. A part of the time should be devoted to the formal study of rhetoric in any good text-book, such as Genung's Outlines of Rhetoric (Ginn), or Scott & Denney's Paragraph Writing (Allyn & Bacon).

6. English Literature. Throughout the high school course much attention should be paid to the study of literature, by which is meant not merely the study of a manual on the history of literature but a careful, sympathetic study of literature itself in the writings of representative authors. Entire masterpieces suited to the attainments of the class should form the basis of recitations and an equal amount of collateral reading should be assigned and written reports required.

During the last year of the course a good outline history of the literature should be used, such as Brooke's Primer of English Literature (Macmillan) or Pancoast's Introduction to English Literatnre (Holt). This should always, however, be subordinated to the study of the texts themselves. In the study of literature the student should be stimulated and trained not merely to read and enjoy but to analyze the style and to absorb the spirit and substance of an author.

The applicant will be expected to be familiar with all of the works in the following list or with their equivalents:

For 1897; Shakspere's As You Like It, Irving's Tales of a Traveler, De Quincey's English Mail Coach, Scott's Marmion, Hawthorne's Twice-Told Tales, Longfellow's Evangeline, Poe's Gold Bug, George Eliot's Silas Marner, Ruskin's Sesame and Lilies, Tennyson's Idylls of the King, Stevenson's Treasure Island, and Kipling's Jungle Books.

For 1898; Shakspere's Macbeth, Milton's Paradise Lost, Books I. and II., The Sir Roger de Coverley Papers in the *Spectator*, Coleridge's Ancient Mariner, Carlyle's Essay on Burns, Shelley's Defence of Poetry, Stevenson's Virginibus Puerisque, Burke's Speech on Conciliation with America, Lowell's Vision of Sir Launfal, Hawthorne's The House of the Seven Gables, Poe's Fall of the House of Usher, De Quincey's The Flight of a Tartar Tribe, Thackeray's Henry Esmond, Arnold's Culture and Anarchy, and Tennyson's The Princess.

7. History. At least four terms' work should be presented in history. The course of study and available text-books should be somewhat as follows: first and second terms, History of Greece (Oman, Smith, Cox or Myers) and Rome (Allen, Leighton, Smith or Myers); third term, History of England (Montgomery or Gardiner); fourth term, The History of the United States (Thomas, Fiske,

Johnson, Montgomery) or Civil Government (Fiske's Civil Government or Andrews' Manual of the Constitution).

Instead of the first three terms' work in history indicated above, which is preferred, the University will accept for the present three terms' work in general history from one of the following text-books: Myers, Fisher, Freeman, or Swinton.

GROUP IV.—ELECTIVE.

Three terms' work, and if Greek is not offered six terms' work, are to be selected in science or in a modern language.

8. Science. The subjects are arranged in the order of preference: physics, botany, physical geography, physiology, drawing or book-keeping, economics, chemistry, astronomy, zoology, geology.

Credit for entrance will not be allowed on these subjects for less than two terms in each, except that one, or one and one half terms, may be allowed in botany, physiology, physical geography, and drawing or book-keeping, and one term in astronomy, geology and economics. In no case should more than two sciences be taken up for consecutive study in a single year; and whenever possible three terms of consecutive work in one science are advised, especially in physics.

9. German. A full year in German may be indicated by Joynes-Meissner's German Grammar, Parts I and III, about fifty pages selected from Joynes' German Reader, all of Storm's Immensee and Gerstaecker's Germelshausen.

10. French. Van Doell's Introduction to the French Language or Edgren's French Grammar, and Van Doell's Introduction to French Authors or Super's French Reader will be accepted as an equivalent of a year's work in French.

PHILOSOPHICAL A COURSE.

The requirements for admission to this course are the same as for the classical course, except that Greek is not prescribed.

PHILOSOPHICAL, SCIENTIFIC AND ENGINEERING COURSES.

The entrance requirements for these courses are in all respects the same as for the classical course, except that twelve terms of work from Group IV. may be substituted for the prescribed work in ancient languages. The Latin preparation, entire, or in part, is however, in all cases preferred. Those who desire to offer a substitution for the Latin preparation are advised to make the following selection of studies: physics, one year; botany, physical geography, physiology, and drawing or book-keeping, one-half year each. The remaining six terms may be selected at the option of the candidates from the other subjects under Group IV; but it is urgently advised that those who do not present any Latin for admission should attain some proficiency in at least one modern language.

The following conditions should be observed:

1. It is strongly advised that preparatory work be confined to few subjects and that they be so chosen that they form two or three groups of closely related subjects.

2. Preparatory credit will not be allowed for less than three terms' work in any foreign language.

3. Substitutes of real equivalents not affecting the absolute requirements respecting Latin, mathematics, English, and history, will be allowed for the purpose of adapting the University requirements to the means and needs of the several preparatory schools.

4. The shortest time in which this preparation can be accomplished is three years devoted entirely to work of high school grade; but it is assumed that, under ordinary circumstances, four years in the high school will be devoted to meet the requirements for admission here prescribed.

ADMISSION BY CERTIFICATE.

At a meeting of the Board of Regents in June, 1891, the following scheme was adopted for the inspection of high schools and for examination to be held thereat:

1. Any school may be placed upon the accepted list upon application of its principal or board of directors, provided the Collegiate

Faculty of the University is satisfied as to its (*a*) course of study, (*b*) methods of teaching, (*c*) facilities for instruction.

2. The course of study of such schools must be adapted for fitting its graduates for some of the collegiate courses of the University, or it must be in the direct line of such preparation.

3. Whenever any accepted school in any of the classes requests it, its pupils may be examined by the University at a convenient time in any subject or subjects selected by the school authorities from the schedules of studies required for admission to the University, and each pupil will receive from the University a credit card for each subject passed.

4. The University shall provide for schools desiring the same, a syllabus of each of the subjects in which examination is to be taken.

5. All accepted schools shall be inspected at the pleasure of the University, the expense of the inspection to be borne by the University.

6. The authorities of accepted schools shall report annually to the University all changes made in the course of study and submit a list of names of the instructors employed in the high school, with subjects taught by each.

The work of inspecting high schools has been continued during the past year and the lists given below have been made.

It is to be said in this connection that the University has not been able to complete a canvass of the high schools of the State, but from such data as it has been possible to collect, by correspondence with Superintendents, by the examination of courses of study, and by visitation, the University feels justified in accepting the schools named below. There are other schools which are doubtless entitled to places on one or other of these lists, but because they have not furnished the data necessary to enable the University authorities to come to a safe conclusion in regard to their proper places in the lists, or because they have not signified a desire to come into accepted relations with the University, they are for the present omitted, without prejudice. Students from such schools will for the present be received as heretofore.

It is the intention of the University to continue the work of high

school inspection until the position of every school which desires to come into accepted relations shall be definitely determined.

All candidates for admission to the Freshman class, who come from accepted schools, or partially accepted schools, must furnish to the University certificates containing *specific statements as to the amount of work done in each study*. Blanks will be furnished for such certificates upon application to the President, and should be returned by September 1st.

Accepted Schools.

Adel,
Albia,
Ames,
Anamosa,
Atlantic,
Belle Plaine,
Boone,
Burlington,
Carroll,
Cedar Falls,
Cedar Rapids,
Centerville,
Charles City,
Clarinda,
Clinton,
Columbus Junction,
Corning,
Council Bluffs,
Creston,
Davenport,
Decorah,
E. Des Moines,
N. Des Moines,
W. Des Moines,
Dubuque,
Estherville,
Fairfield,
Greene,
Greenfield,
Guthrie County,
Hampton,
Harlan,
Independence,
Iowa City,
Iowa Falls,
Knoxville,
Keokuk,
LeMars,
Leon,
Manchester,
Maquoketa,
Marengo,
Marion,
Marshalltown,
Mason City,
McGregor,
Missouri Valley,
Moline, Ill.,
Montezuma,
Mt. Ayr,
Mt. Pleasant,
Muscatine,
New Hampton,
Newton,
Red Oak,
Rock Rapids,
Sanborn,
Sheldon,
Shenandoah,
Sibley,
Sigourney,
Sioux City,
Spencer,
Springdale,
Storm Lake,
Stuart,
Taylorville Tp., Taylorville, Ill.,
Villisca,
Vinton,
Washington,
E. Waterloo,
W. Waterloo,
Waukon,
Waverly,
Webster City,
Williamsburg,

[School.
Calhoun County Normal
Charles City College,
Denison Normal School,
Iowa City Academy,

Fort Dodge,	Oelwein,	Washington Academy,
Fort Madison,	Osceola,	Whittier College,
Geneseo, Ill.,	Oskaloosa,	Wilton German-English College,
Glenwood,	Ottumwa,	
Glidden,	Parkersburg,	Woodbine Normal School

The following schools are accepted as making full preparation for all non-Latin courses:

Cresco,	Grundy Center,	Sioux Rapids,
Denison,	Keosauqua,	Victor.
Forest City,	Odebolt,	

The work done in the schools named below is regarded as of sufficient merit to entitle them to recognition by the University.

Properly certified work from these schools will therefore be received so far as this work meets the preparatory requirements of the University.

Adair,	Dysart,	Northwood,
Algona	Eagle Grove,	Reinbeck,
Allerton,	Elkader,	Riceville,
Anita,	Exira,	Sabula,
Audubon,	Fayette,	Sac City,
Avoca,	Hamburg,	Shelby,
Brighton,	Hubbard,	Shell Rock,
Britt,	Jefferson,	Springville,
Charter Oak,	Kingsley,	State Center,
Clarence,	Lake Mills,	Tama City,
Clarion,	Mechanicsville,	Traer,
Clearfield,	Milton,	Wapello,
Clear Lake,	Morning Sun,	West Union,
Corydon,	Moulton,	Wilton Junction.
DeWitt,	Neola,	

Advanced Standing. Graduates from the four years' course of the State Normal School will be admitted to Junior standing without examination, and graduates of the three years' course to the Sophomore class, but with an assignment of studies according to the discretion of the Faculty. Students from approved colleges bringing cer-

tificates of work and standing will be admitted without examination, except to determine their position in the University.

In the case of colleges where the requirements for admission are substantially those of the University, students will ordinarily be admitted to the same rank if they enter not later than the opening of the Senior year. In every instance, at least one full year's work must be completed in the Collegiate Department of the University. The assignment of studies shall be at the discretion of the Faculty.

Undergraduate Courses.

CLASSICAL COURSE.

Freshman Year.	FALL.	WINTER.	SPRING.
Greek	5 hours a week	5	5
Latin	4	4	4
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	1	3
Sophomore Year.			
French or German	5	5	5
English	2	2	2
Elective	8	8	8
Military Drill	3	1	3
Junior Year.			
Elective	15	15	15
Military Drill	3	1	3

Senior Year.	FALL.	WINTER	SPRING.
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE A.

Freshman Year.	FALL.	WINTER.	SPRING.
German or French	5	5	5
Latin	4	4	4
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	1	3
Sophomore Year.			
French or German	3	3	3
Latin, German, or French	5	5	5
English	2	2	2
Elective	5	5	5
Military Drill	3	1	3
Junior Year.			
Philosophy	2 or 3	2 or 3	2 or 3
Elective	12 or 13	12 or 13	12 or 13
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE B.

Freshman Year.	FALL.	WINTER.	SPRING.
German	5	5	5
Latin or French	5	5	5
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	1	3
Sophomore Year.			
German	3	3	3
English	2	2	2
Latin or French	5	5	5
Elective	5	5	5
Military Drill	3	1	3
Junior Year.			
Elective	15	15	15
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science are required during the course. In the Junior and Senior years, a *major*, the equivalent of not less than three hours, extending through two years, and a kindred *minor* of not less than three hours, extending through one year, must be taken. Each student may select his own major, but in the selection of his minor he must seek the advice of the professor in charge of the major, or of a committee of the Faculty. Students entering this course on the terms prescribed for admission to the Scientific Course but without the full Latin requirements for entrance to Course Philosophical A, must complete them after entrance, and the University will temporarily provide for instruction in Cæsar, Cicero's Orations and Vergil. This provision is made solely in the interest of con-

siderable numbers of high school graduates whose course has not furnished the opportunity for fulfilling these requirements.

GENERAL SCIENTIFIC COURSE.

Freshman Year.	FALL.	WINTER.	SPRING.
German or French	5	5	5
Mathematics	5	5	5
English	2	2	2
History or Drawing	2	2	2
Military Drill	3	1	3
Sophomore Year.			
German or French....5 or	3	5 or 3	5 or 3
English	2	2	2
Physics	5	5	5
Botany, Zoology, Morphology, Geology, Chemistry, Mathematics, or Astronomy	5	5	5
Military Drill	3	1	3
Junior Year.			
German or French.... 3 or	5	3 or 5	3 or 5
Chemistry	5	5	5
Botany, Zoology, Morphology, or Geology	5	5	5
Elective .....3 or	5	3 or 5	3 or 5
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

No substitution whatever is allowed for any of the required work of the Scientific Course, except that an equivalent amount of Latin of collegiate grade may be offered in place of the full requirement in either one of the modern languages.

SPECIAL COURSES IN SCIENCE.

The student who wishes, in his undergraduate course, to specialize in some particular line of scientific study, should at the beginning of the Sophomore year choose from the group of alternate electives then open to him (Botany, Morphology, Geology, Chemistry, Mathematics and Astronomy) that subject most directly connected with the branch to which he wishes to give special attention. He will thus be able to pursue his chosen study without interruption through three years of his course, the last year of which may, if he so choose, be devoted entirely to his specialty.

Such extreme specialization is not recommended to undergraduate students, it being the opinion of the Collegiate Faculty that a better preparation for a scientific career will be afforded by a broader and more liberal course of study. However, those wishing to specialize in any branch of science are urged to confer freely with the professors with whom they expect to pursue such study.

Unless excused by the Faculty, each student pursuing a special course in Science will be required in his Senior year to prepare a thesis upon some subject approved by the professor in charge of his specialty, such thesis to represent an amount of work entitling the writer to at least two credits.

Combined Scientific and Medical Course.

1. Students who pursue the General Scientific Course and complete not less than two years of biologic science, who in the third year elect as one elective Anatomy and Dissection in the Medical Department, and in the fourth year two electives in the Medical Department, of which Anatomy and Physiology shall be one, may receive credit for the first two years of the regular course in Medicine, provided also that such students complete at least two electives in the Collegiate Department in the spring terms of the fifth and sixth years.

2. Students who at the outset declare their intention of pursuing a combined Collegiate and Medical Course, may in the General Scientific Course offer instead of German, two years' work in Latin.

3. The degree of B. S. shall be conferred in June of the sixth year.

COURSE IN CIVIL ENGINEERING.

FRESHMAN YEAR.

Fall Term.—French or German, 5. Mathematics, 5. English, 2. Drawing, 5. Military Drill, 3.

Winter Term.—French or German, 5. Mathematics, 5. English, 2. Drawing, 5. Military Drill, 1.

Spring Term.—French or German, 5. Mathematics, 5. English, 2. Surveying, 5. Military Drill, 3.

SOPHOMORE YEAR.

Fall Term.—German or English, 3. Mathematics, 5. Surveying, 5. Physics, 5. Military Drill, 3.

Winter Term.—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Mapping, 3. Physics, 5. Military Drill, 1.

Spring Term.—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Topographical Surveying, 3. Physics, 5. Military Drill, 3.

JUNIOR YEAR.

Fall Term.—Electricity and Magnetism, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Railroad Curves, 3. Steam Engine, 2. Military Drill, 3.

Winter Term.—Dynamo and Motor, 3. Civil Engineering, 2. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Theory of Stresses, 3. Limes and Cements, 2. Military Drill, 1.

Spring Term.—Thermodynamics, 3. Civil Engineering, 2. Hydraulics, 5. Graphical Statics, 3. Theory of Stresses, 5. Military Drill, 3.

SENIOR YEAR.

Fall Term.—Chemistry, 4. Sanitary Engineering, 2. Structural Drawing and Designing, 4. Geology, 5. Civil Engineering, 4. Military Drill, 3.

Winter Term.—Chemistry, 4. Sanitary Engineering, 2. Structural Designing, 3. Resistance of Materials, 2. Geology, 4. Civil Engineering, 3. Military Drill, 1.

Spring Term.—Water Supply Engineering, 3. Specifications and Contracts, 3. Geology, 4. Civil Engineering, 3. Structural Designing, 3. Thesis. Military Drill, 3.

COURSE IN ELECTRICAL ENGINEERING.

FRESHMAN YEAR.

Fall Term.—German or French, 5. Mathematics, 5. English, 2. Drawing, 5. Military Drill, 3.

Winter Term.—German or French, 5. Mathematics, 5. English, 2. Drawing, 5. Military Drill, 1.

Spring Term.—German or French, 5. Mathematics, 5. English, 2. Draughting, 5. Military Drill, 3.

SOPHOMORE YEAR.

Fall Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

Winter Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 1.

Spring Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

JUNIOR YEAR.

Fall Term.—Physics, lectures, 1, laboratory, 4. Chemistry, 5. Analytical Mechanics, 3. Applied Mechanics, 2. Shop-work, 2. Military Drill, 3.

Winter Term.—Physics, lectures, 1, laboratory, 4. Chemistry, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Shop-work, 2. Military Drill, 1.

Spring Term.—Direct Current Dynamo, 3. Physical Laboratory, 2. Chemistry, 5. Differential Equations, 3. Heat and Thermo-Dynamics, 2. Shop-work, 2. Military Drill, 3.

SENIOR YEAR.

Fall Term.—Theory of Electricity, Photometry; Electrical Laboratory, 10. Draughting, 3. Steam Engine, 2. Military Drill, 3.

Winter Term.—Alternate Current Machinery, Electrical Laboratory, 10. Draughting, 3. Strength of Materials, 2. Military Drill, 1.

Spring Term.—Distribution and Transmission of Electricity, Telegraph and Telephone Electrical Laboratory, 10. Electro-Chemistry, 5. Military Drill, 3.

NOTE.—One year of German and one of French are required. Either may be taken during the Freshman year, to be succeeded by the other in the Sophomore year. Electro-chemistry, being given only during even-numbered years, will alternate with the Junior spring term chemistry every other year.

BACCALAUREATE DEGREES.

For each of the courses of study leading to a degree four years' work is required.

On completion of the regular courses, or of the special courses approved by the Faculty, the following degrees are conferred:

BACHELOR OF ARTS upon those who complete the Classical Course.

BACHELOR OF PHILOSOPHY upon those who complete the Philosophical Course.

BACHELOR OF SCIENCE upon those who complete the General Scientific Course, or either of the Engineering Courses, or a special course in science which has previously been approved by the Faculty.

The degree of BACHELOR OF DIDACTICS is conferred upon graduates in the regular courses who have completed the course in Pedagogy and can show proof of two years' successful teaching after graduation.

Courses of Instruction.

LATIN LANGUAGE AND LITERATURE.

PROFESSOR CURRIER, MR. POTTER AND MISS HUGHES.

1. **Cæsar, Cicero and Vergil.** Cæsar, Cicero's Orations and Vergil's Aeneid. For students in Course Philosophical B. as indicated on page 26. Miss HUGHES.

Throughout the year.

2. **Livy, Cicero and Terence.** Fall: Livy, Selections from Books I., XXI. and XXII. Winter: Cicero's De Senectute and De Amicitia, with outline of Roman Literature. Spring: Terence's Phormio and Cicero's Letters. Grammar, writing Latin and sight reading during the year. Those who show marked proficiency in writing Latin during the fall term are allowed an option of easy Latin to be read under the direction of the instructor during the winter and spring terms. Mr. POTTER and Miss HUGHES.

Throughout the year, Mon., Tu., Wed. and Th., at 10, 11 and 2:30.

3. **Cicero and Horace.** Fall: Cicero's Tusculan Disputations. Winter and spring: Horace's Odes, Satires and Epistles. This course is mainly occupied with the literary side of the authors studied. Professor CURRIER.

Throughout the year, Mon., Wed. and Fri. at 9.

4. **Pliny and Tacitus.** Selected Letters of Pliny. Tacitus' Germania and Agricola. This course is principally literary and historical. As much attention is given to the Latinity of the Silver Age as is needful for the understanding and appreciation of the authors. Mr. POTTER.

Throughout the year, Tu. and Th. at 9.

5. Cicero, Quintilian and Tacitus. Fall: Cicero's De Oratore. Winter: Quintilian, Books X. and XII. Spring: Tacitus' De Oratoribus. Particular attention will be paid to literary criticism as exemplified in these authors. Professor CURRIER.

Throughout the year, Tu. and Th., at 8.

6. Tacitus and Seneca. Fall and winter: Tacitus, selections from the Annals and Histories. Spring: Seneca's Morals and Letters. Professor CURRIER.

Throughout the year, Tu. and Th. at 8.

Courses 5 and 6 are given in alternate years.

7. Plautus. Three plays. The treatment is mainly literary but with due attention to metres and ante-classical forms and constructions. Mr. POTTER.

Fall term, three hours.

8. Early Latin Inscriptions and Poetry. The course will be based upon Merry's Fragments of Early Roman Poetry and the Corpus Inscriptionum Latinarum. One play of Terence will be read to the class by the instructor. Mr. POTTER.

Fall term, three hours a week.

Courses 7 and 8 are given in alternate years.

9. Lucretius and Catullus. Mr. POTTER.

Winter term, three hours a week.

10. Cicero's Letters. The selections will be such as to show Cicero in the character of a private gentleman rather than as a politician. Mr. POTTER.

Winter term, three hours a week.

Courses 9 and 10 are given in alternate years.

11. Juvenal and Persius. Mr. POTTER.

Spring term, two hours a week.

12. Martial. Studied as a picture of life and manners. Mr. POTTER.

Spring term, two hours a week.

Courses 11 and 12 are given in alternate years.

13. Seminary in Cæsar, Cicero and Vergil. This is intended to meet the needs of prospective Latin teachers and others who

wish to gain some familiarity with the methods of original research. The fall term is devoted to syntactical and historical studies covering Cæsar's Gallic War (seven books). The work of the winter term is mainly historical, and deals with Cicero's career as an orator with the particular study of six orations. One-half of the term is devoted to a study of the conspiracy of Catiline which is based largely on Sallust. Vergil's Aeneid complete is studied in the spring term mainly on the literary side. Mr. POTTER.

14. *a.* **History of Roman Literature.** The course will be given by lectures with assigned readings in Teuffel, Cruttwell, Sellar, Simcox and the standard monographs. Fall term, two hours a week.

b. **Latin Syntax.** Introduction to the study of historical syntax. Winter term, two hours a week.

c. **Latin Composition.** Advanced course. This course consists of a study of the descriptive, narrative and oratorical styles of some of the leading Latin writers through attempts at imitation. Spring term, two hours a week. Mr. POTTER.

Courses 13 and 14 are given in alternate years.

15. Roman Antiquities. A systematic study of private life and of legal and political Antiquities. Professor CURRIER.

Throughout the year, two hours a week at 2:30.

16. Seminary in Archæology. For 1897-8 the subject will be the Topography and Archæology of Rome and the vicinity.

17. Cicero, Livy and Ovid. Sight reading of suitable selections. Professor CURRIER.

Throughout the year, one hour a week.

18. Teachers' Course. Methods. Professor CURRIER.

Spring term, two hours a week.

Courses 5 and 6 are open to students who have completed Courses 2 and 3 or 4 and must precede the other courses offered. Course 16 is intended for graduate students, and Courses 10—18 are open to them.

GREEK LANGUAGE AND LITERATURE.

ASSISTANT PROFESSOR CALL.

For the present a course in Goodwin's Greek Grammar, White's First Greek Book and Xenophon's Anabasis will be given to students who enter without the required preparation in Greek.

Throughout the year, daily at 11.

1. **Xenophon, Lysias and Homer.** Fall: Xenophon's Anabasis with written exercises based on the text read, and review of grammar. Winter: select orations of Lysias, social customs and political institutions. Spring: Homer's Iliad with study of Homeric times and the history and character of Greek epic poetry.

Throughout the year, daily at 10.

2. **Herodotus, Plato and Demosthenes.** Fall: selections from Herodotus. Winter: Plato's Apology with sight reading from Xenophon's Memorabilia. Spring: Demosthenes' Oration on the Crown.

Throughout the year, Mon., Wed., Fri., at 9.

3. **Greek Tragedy,** Fall: Aeschylus' Prometheus Bound. Winter: Sophocles' Antigone. Spring: Euripides' Alcestis. With this course are required supplementary readings from other tragedies and reports on the origin, literary form, and representation of Greek tragedy.

Throughout the year, Mon. Wed., Fri., at 8.

4. **Late Greek.** Fall: New Testament. Winter: Plutarch's Pericles. Spring: Lucian's Dialogues.

Throughout the year, Tu., Th., at 9.

5. **Greek Poetry.** A course in Greek poetry through translations will be given to students who have no knowledge of Greek. Fall: epic poetry. Winter: dramatic poetry. Spring: epic and lyric poetry.

Throughout the year, Tu., Th., at 8.

Course 1 is required of students in the classical course. Courses 2, 3 and 4 are open to students who have completed Course 1.

GERMAN LANGUAGE AND LITERATURE.

PROFESSOR WILSON; MR. STURM, MR. SCHLENKER.

In the instruction in the German language the first year is spent in laying a broad foundation for the future work. At the beginning of the second year it is expected that the student will be able to read the literature with some degree of appreciation, and from this time on the ability to understand and to appreciate the great masterpieces of German literature is the main object in view; at the same time, however, the origin and history of words, and the relation that the German language bears to the English tongue are studied and explained. But the courses are, as a whole, literary rather than strictly philological or linguistic. Sight-translation, translating at hearing, writing from dictation, and conversation, as means to a proper *Sprachgefuehl*, form a part of the work.

As stated elsewhere, an equivalent of the work required in the Freshman year, Course 1, will be accepted, and students coming so prepared will be admitted, on examination, to Course 2. Course 1, represents from four to six terms of ordinary high school work. Courses 1, 2, 3, and 4, are Freshman, Sophomore, Junior, and Senior respectively and must be taken in the order of the numerals. Courses 5, and 6. are advanced courses, but may be open to persons who have done at least 1 and 3, or an equivalent. Course 7 is a special course and is intended primarily for scientific students; it must be preceded by at least one full year's work.

1. **Grammar and Reading.** Thomas's Practical German Grammar with constant practice in writing German, Storm's Immensee, Hillern's Hoeher als die Kirche, and Heyse's L'Arrabbiata. Six sections. Mr. STURM and Mr. SCHLENKER.

Throughout the year, daily.

2. **Freytag, Goethe and Schiller.** Fall: Freytag's Die Journalisten with a review of the grammar. Winter: Goethe's Hermann und Dorothea, and composition. Spring: it is expected that students in the scientific courses will take during this term Scientific German,

Course 7, instead of the regular literary work. The regular literary course is as follows: Schiller's Jungfrau von Orleans, and composition. Four sections. Professor WILSON and Mr. SCHLENKER.

Throughout the year, Mon., Wed., Fri.

3. German Authors of the Nineteenth Century and German Lyrics. Fall: Scheffel's Ekkehard (1896-97) and readings in German on the literature of the nineteenth century. Winter: Heine's Prose, and readings from Heine's Poetry by the instructor. Spring: Buckheim's Deutsche Lyrik, and lectures on German verse with special reference to the lyric poets studied. The work of this term is intended to give a general idea of the historical development of the German lyric from the sixteenth century to the present. Professor WILSON.

Throughout the year, Mon., Wed. Fri., at 11.

4. Goethe, Lessing and History of German Literature. Fall: Goethe's Faust, Part I, with an outline of Part II. Winter: Lessing's Nathan der Weise. Spring: outline course in the history of German literature. This course gives a general view of the development of German literature from the earliest times to the nineteenth century, special attention being paid to the two classic periods of the twelfth and eighteenth centuries. Egelhaaf's Deutsche Litteraturgeschichte is used as a chronological guide, which is supplemented by reports on assigned reading. Professor WILSON.

Throughout the year, Tu., Th., at 11.

5. German Seminary. For the study and discussion of the works of special periods or of special movements. The Faust Books, Marlowe's Faustus and Goethe's Faust were the subjects in 1896-97. This course is primarily for graduate and advanced students. Admission by personal application. The course counts as a half credit each term. Professor WILSON.

Throughout the year, Tu., at 2:30.

6. Middle High German. Fall: Otis's Introduction to Middle High German, including the selections from the Nibelungen Lied, and Paul's Mittelhochdeutsche Grammatik. Winter: selections from Hartmann von Aue's Der arme Heinrich. Spring: Middle High German lyric poetry, principally the poems of Walther von der Vogel-

weide. This course is primarily for graduate and advanced students, especially those who expect to teach German. Professor WILSON.

Throughout the year, Tu., Th., at 10.

7. Scientific German. This course is designed especially for students who wish to acquire a scientific vocabulary and some facility in reading technical writings. Brandt and Day's German Scientific Reading is used as a text-book. Applicants must have completed Course 1 or an equivalent. Mr. STURM.

Spring term, Mon., Wed., Fri., at 8.

As a branch of the German department of the University library a special German library has been founded and it is hoped this collection may be extended. There are already several hundred volumes on the shelves in the alcove set aside for this purpose in the general library. The donors have been chiefly, though not exclusively, German-Americans of Iowa.

FRENCH LANGUAGE AND LITERATURE.

PROFESSOR VAN STEENDEREN; MISS HUTCHINSON.

1. Elementary French. Grammar, reading, composition and conversation; Bevier's French Grammar, Van Daell's French Reader, Erckmann-Chatrian's Le Conscrit de 1813, Halévy's L'Abbé Constantin, Herdler's Scientific Reader, Méthode Berlitz, Part 1. Miss HUTCHINSON.

Throughout the year, daily.

2. French Composition. Written and spoken composition: Grandgent's French Composition and Part II. of Méthode Berlitz. Professor VAN STEENDEREN.

Fall term, Mon., Wed., Fri., at 9.

Intermediate French. Reading and composition: Bowen's French Lyrics, O'Conner's Choix de Contes Contemporains, Mérimée's Lettres à une Inconnue, Victor Hugo's Hernani, Alphonse

Daudet's Le Nabob, Grandgent's Composition continued. Professor VAN STEENDEREN.

Winter and spring terms, Mon., Wed., Fri., at 9.

Courses 2 and 3 are to be taken in succession.

4. French Classical Drama. Corneille's Horace, Cinna and Le Cid, Racine's Athalie and Ephigénie, Molière's L'Avare, Le Tartufe and Les Femmes Savantes. Professor VAN STEENDEREN.

Throughout the year, Tu., Th., at 11.

5. Modern French Authors. Each student reads and paraphrases about five representative works of different authors. The University library provides these works. Text books: Fortier's Sept Grands Auteurs du XIX^e^ Siècle and Mellé's Contemporary French Writers. Professor VAN STEENDEREN.

Fall and winter terms, Mon., Wed., at 8.

6. Advanced French and Composition. Victor Hugo's Les Travailleurs de la Mer. Free composition on subjects assigned. Professor VAN STEENDEREN.

Spring term, Mon., Wed., at 8.

Courses 5 and 6 are to be taken in succession.

7. History of French Literature. Lectures in the French language. Text-books: Duval's Litterature Française, Montaigne's De l'Institution des Enfans. Professor VAN STEENDEREN.

Throughout the year, Tu., Th., at 10.

8. Seminary. Nineteenth century French literature. Professor VAN STEENDEREN.

Throughout the year, Wed., at 2:30.

9. Spanish. Edgren's Spanish Grammar, Matzke's First Spanish Readings. Professor VAN STEENDEREN.

Spring term, Mon., Wed., Fri., at 11.

Courses 2, 3 and 4 or 2, 3 and 5, 6 may be taken together. Also 5, 6 and 7 or 8, but both 7 and 8 must be preceded by 2, 3. Course 9 must be taken with or after Course 1.

ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR WAUCHOPE; MR. COOK AND MR. KELLEY.

The organization of the following courses has in view the study of English as (1) a *means of expression*, (2) a *literature*, (3) a *language*.

Group (1) consists of courses in rhetoric and theme-writing. Here the chief aim is by constant practice and sharp but kindly criticism to enable the student to form a clear, forcible and artistic style. He is at the same time, by constant work in the library, made familiar with the best modern stylists, and is trained in methods of criticism and interpretation.

Group (2) embraces a sympathetic and critical study of our literature as an expression in artistic form of the mind of a great people. An outline sketch is given in the Sophomore year, and this is followed in the Junior and Senior years by the broader and deeper study of special periods, and an insight is gained into the currents of thought and feeling of a particular age. Here the literature is treated as a fine art including not merely an appeal to the feelings through beauty of form but also embodying a philosophy of life. In both groups the idea is constantly kept in view that the study of English, in addition to its intellectual value, is a powerful means of spiritual culture, and to this end the artistic and ethical teachings of our great writers are emphasized.

In Group (3) the subject is considered from its philological side. The language is studied historically as an organic growth, its structure, phonology and etymology are examined, and specimens of the prose and the poetry of the Anglo-Saxon and Middle English periods are read. A knowledge of French and German will be of the greatest value to students taking these courses.

Candidates for all baccalaureate degrees are required to complete two years of English, that is six terms of two lectures a week. Freshmen will take Course 1, and Sophomores Course 4. Those who are preparing to teach English should take at least the fall term of Course 12 in addition to some of the elective courses in literature. Law students wishing to take work in English will find Course 10 especially helpful.

(1) RHETORIC.

1. **Rhetoric and Composition.** Lectures. Semi-weekly themes with written and oral criticism; Wendell's English Composition, Hill's Principles of Rhetoric, and library work. Five sections. Required of Freshmen. Professor WAUCHOPE, Mr. COOK and Mr. KELLY.

Two hours a week throughout the year.

2. **Advanced Composition.** Lectures. Wendell's English Composition, and suggestive works on style. Tri-weekly and fortnightly themes. Open to those only who have attained Grade A in Course 1, and who wish to refine and strengthen the prose style acquired in that course. Mr. COOK.

Fall and winter terms, two hours a week.

3. **Versification.** Practice in metrical composition in the fixed forms of verse such as the heroic couplet, blank verse, Spenserian stanza, ode, rondeau, sonnet, ballad and song. Analysis of the best examples of these forms in English poetry. Informal discussion of artistic questions. Open to those who have had Course 2. Mr. COOK. Spring term, two hours a week.

(2) ENGLISH LITERATURE.

4. **English Literature.** General survey from Chaucer to Tennyson. Lectures. Study of masterpieces in prose and poetry; recitations, essays, and reports on collateral work in the library. Four sections. Required of Sophomores. Professor WAUCHOPE, Mr. COOK and Mr. KELLY.

Two hours a week throughout the year.

5. **Chaucer's Poetry.** A study in fourteenth century art. Open to those who have had the training of Course 4 in Chaucer's grammar and pronunciation. Lectures; Skeat's The Student's Chaucer. Mr. COOK.

Spring term, two hours a week.

6. **The English Novel.** Conducted on the seminary plan with weekly papers, reports and discussions. Fall term: Seventeenth century romance, Swift, Defoe, Richardson, Fielding, Smollett and Sterne. Winter term: The romantic revival, novels of domestic life,

Austen, Scott, Dickens, Thackeray, George Eliot, Poe and Hawthorne. Spring term: Stevenson, Du Maurier, and some of the more prominent living writers of fiction. Open to Juniors and Seniors. Professor WAUCHOPE.

Two hours on Monday afternoon throughout the year.

7. Shakspere and His Fellow-Playwrights. A critical study of dramatic art. Lectures, reading of plays, reports. Freytag's Technique of the Drama, Moulton's Shakspere as a Dramatic Artist, any standard edition of Shakspere, and (in the library) the Mermaid series. Junior and Senior elective. Mr. COOK.

Fall and winter terms, Tu. and Th. at 11.

8. English Literature of the Eighteenth Century. Seminary plan of study; lectures, reports, discussions; assigned readings of masterpieces and standard criticism. Junior and Senior elective. Alternate years; to be given in 1897-98. Mr. KELLY.

Fall and winter terms, two hours a week.

9. English Literature of the Nineteenth Century. A critical study of the literary art of the century through its representative poets, essayists and novelists. Lectures, recitations and reports. Fall term: The romantic movement; Wordsworth, Coleridge, Byron, Shelley, Keats, Lamb, Hazlitt and Leigh Hunt. Winter term: De Quincey, Landor, Macaulay, Carlyle, Scott, Dickens, and Thackeray; the relation of the novel to literature and life. Spring term: George Eliot, Stevenson, Ruskin, Arnold, Tennyson and Browning; recent phases of poetry and fiction. Junior and Senior elective. Professor WAUCHOPE.

Throughout the year, Tu. and Th. at 10.

10. Essayists and Orators. A study in prose. Lectures and recitations. Fall term: A critical study of Macaulay, Carlyle and De Quincey in respect to style and substance. Winter term: A critical study of Burke as stylist, debater, and orator, with such reference to his political philosophy and to contemporaneous history as is necessary to a clear understanding of his importance in political literature. Spring term: A critical study of Emerson and Webster. Junior and Senior elective. Mr. KELLY.

Two hours a week throughout the year.

11. American Literature. Lectures, recitations, reports, and assigned readings of masterpieces and standard criticism. General survey of both poetry and prose, including political literature and oratory. Junior and Senior elective. Alternate years; not to be given in 1897-8. Mr. KELLY.

Two hours a week throughout the year.

(3) ENGLISH LANGUAGE.

12. History of the English Language. Lectures with maps and charts, on the relation of English to the Aryan family of languages, the Anglo-Saxon literature, the early English dialects, the linguistic effects of the various invasions of England, the native vocabulary and the loan elements, and the history of inflections. Lounsbury's History of the English Language, and Sweet's Anglo-Saxon Reader. The study of Anglo-Saxon is begun in this class. This course is especially recommended to all students wishing to become teachers of English. Sophomore, Junior and Senior elective. Professor WAUCHOPE.

Throughout the year, Wed., Fri., at 2:30.

13. Anglo-Saxon. Reading of selections from Alfred, Aelfric, Wulfstan, Bede, *Beowulf*, Caedmon, Cynewulf, *Judith*, and minor poems. Lectures introductory to Germanic philology. Sweet's Anglo-Saxon Reader, Harrison and Sharp's Beowulf. Open to those who have had Course 12. Primarily for graduates, 1897–98. Professor WAUCHOPE.

Throughout the year, two hours a week.

14. Gothic and Old Saxon. Bernhardt's Die gotische Bibel des Vulfila, Siever's Heliand, and Heyne's Die altgermanischen Dialecte. Lectures on Germanic philology in its relations to English. Open to students who have taken Courses 12 and 13, and who have a reading knowledge of German. Graduate course 1897–98. Professor WAUCHOPE.

Throughout the year, two hours a week.

15. Teachers' Course. During the spring term of 1898 a course of lectures intended primarily for teachers of English in the secondary schools will be given one hour a week. Among the subjects discussed will be historical grammar, the periods in the development of the

language, the principles of etymology, and methods of teaching grammar, rhetoric and literature. Professor WAUCHOPE.

Sawyer Prize. A special gold medal, or a purse of twenty-five dollars, known as "The Sawyer Prize," is offered for 1898 for the best essay of three thousand words written by any student of the University on a subject approved by the Professor of English.

ELOCUTION.

MRS. PARTRIDGE.

1. **Elementary Vocal Training.** Studies in phonics with reference to articulation, and the eradication of faults of speech or voice; development of breath control for artistic voice production; studies of the factors of speech; the timbre of the voice; stress as applied to tones, emphasis and accent, with selections adapted for illustration and analysis; studies in gesture; readings from standard authors.

This course is open to Collegiate Freshmen, and Junior Law students.

Throughout the year, two hours a week.

2. **Vocal Expression.** Elementary Principles of Vocal Expression: correct mental action in reading and speaking; studies and presentations from speeches and forms of the drama, to develop the powers of conception and the ability to express every phase of human experience as a means of securing simplicity and naturalness in all kinds of speaking. Lectures on problems in vocal expression. Study of monologues, impersonations, and miscellaneous selections, with individual criticism. This course is open to Sophomores who have completed Course 1.

Throughout the year, one hour a week. Each student receives in addition to class exercises a private rehearsal each week.

3. **Oratory.** Application of the principles of expression to the oratory of the bar: special exercises for the development of extemporaneous speaking; study of orations with the methods employed by leading orators; selections from Shakspere's tragedies and comedies as one of the best means of studying human character, studies in gesture for developing self-control, and spontaneity of action. This course is open to Senior Law students.

Fall and winter terms, two hours a week.

HISTORY.

PROFESSOR WILCOX; MR. PLUM.

1. **History of Greece.** Text-book and lectures. This course is intended primarily for members of the Freshman class. Mr. PLUM.

Fall term, two hours a week.

2. **History of Rome.** Text-book and lectures. This work consists of two parts: the History of the Roman Republic in the winter term, and the History of the Roman Empire in the spring term. The work of both terms is designed for members of the Freshman class. Mr. PLUM.

Winter and spring terms, two hours a week.

3. **History of Mediæval Europe.** Text-book and lectures. This course is intended primarily for members of the Sophomore class and presupposes acquaintance with the History of Greece and Rome. The course is divided into three parts to correspond with the three terms of the University year. The first part, constituting the work of the fall term, extends from the final overthrow of the western Roman empire in 476 A. D. to the death of Charles the Great, 814 A. D. The work of the winter and spring terms traces the downfall of the Carolingian system and its gradual reconstruction into Modern Europe. Professor WILCOX.

Three terms, two hours a week.

4. **Constitutional History of England.** Analyses and lectures. This course is intended for members of the Junior and Senior classes only. As much previous work as possible in Ancient and Mediæval History should be taken before beginning this course. Professor WILCOX or Mr. PLUM.

Three terms, three hours a week.

5. **Constitutional History of the United States.** Lectures. This course is designed for Senior and Graduate students. The course embraces, during the fall term, the study of the origin and development of the constitution of the United States, from preceding political forms. The winter term continues the work in a study of the text of the constitution in the light of its historical outworking. The spring

term finishes the work with a study of the working of the United States Government under the constitution from 1789 to the present. Professor WILCOX.

Three terms, three hours a week.

6. The French Revolution and the Napoleonic Era. This course is designed for Senior and Graduate students. Considerable work in Mediaeval History is an indispensable prerequisite. Professor WILCOX.

Fall and winter terms, two hours a week.

7. The Nineteenth Century History of Europe. This is a sequel to Course 6 or its equivalent, and is open to the same classes of advanced students. Professor WILCOX.

Spring term, two hours a week.

8. Seminary in English History. This course is intended primarily for Graduate students who are qualified to specialize in English History. Those Senior students who have had Course 4 and are capable of doing original and independent work will be admitted to this Seminary. Professor WILCOX.

Three terms, two hours a week.

9. Seminary in United States History. This course is also primarily designed for graduate students, but exceptions are made similar to those specified for Course 8. Professor WILCOX.

Three terms, two hours a week.

All the courses in History, including the two Seminaries, are given each year. There are no alternating courses.

All courses in History are elective. Admission to the courses is conditioned only upon the qualifications of the candidate who desires to to take the courses.

Students are advised to plan their historical work so that it will be logical in its order of sequence. Students who intend to emphasize historical work in college are urged to make careful preparation in History in preparatory schools.

In arranging the courses in History in the University the attempt has been made to present the entire field of historical study with reference to logical and chronological sequence, so that no period shall be neglected and each period be treated in the light of what goes before and what comes after.

POLITICAL SCIENCE.

PROFESSOR LOOS; ASSISTANT PROFESSOR SHAMBAUGH, DR. HARRIS, MR. BROCK AND MR. VAN LAW.

To mark, to some extent, the differentiation of the several branches of political science the courses here offered are grouped in the main under the following headings: (1) *Political Economy and Finance*, (2) *Public Law and Administration*. The requirement of three consecutive terms of work in order to receive credit will apply to the respective groups. Courses 2 and 11 are the fundamental courses in economics and politics respectively, and undergraduates are advised to select these courses as an introduction to advanced work in the group under which each stands.

POLITICAL ECONOMY AND FINANCE.

1. **Economic History.** After an introductory study of primitive man and primitive civilization (Starr's First Steps in Human Progress) the course will occupy itself mainly with the development of trades and manufactures in Europe (Cunningham's Industrial History), and later with the industrial development of the United States (Wright's Industrial Evolution of the United States). Open to Sophomores. Mr.————.

Throughout the year, Tu., Th. at 8.

2. **Economics.** An introduction to the study of political economy. Text-book and lectures. Open to Juniors and Seniors. Professor LOOS, Mr. BROCK and Mr. VAN LAW.

Fall term daily at 11.

3. **Finance, Currency and Banking in the United States.** Lectures on the financial history of the United States including a discussion of the currency and a study of banks and banking. Open to Juniors. Professor LOOS and Mr. VAN LAW.

Winter term, Mon., Wed., Fri. at 11.

4. **Transportation.** The course will deal chiefly with railways: railroad organization and management, explanation of terms in com-

mon use in railroad accounts and reports; history of railroad development, discussion of rates, competition, discrimination, and state management (Hadley's Railroad Transportation); the commission system, state and inter-state. Open to Juniors. Mr.————.

Winter and spring terms, Tu., Th. at 2:30.

5. The Industrial Revolution and Modern Social Questions. An elemenrary course in recent economic history and theory. An analysis of the industrial revolution with lectures on modern socialism, contemporary economic schools, and recent tendencies in legislation. Open to those who have passed in Course 2. Professor LOOS and Mr. BROCK.

Winter and spring terms, Tu., Th. at 11.

6. The Principles of Economics. The development of the classical political economy will be carefully studied. Special attention will be given also to the mathematical work of Jevons and other writers; and to the recent contributions of the Austrian school. Professor Marshall's Principles of Economics will be used as a text. For Seniors and Graduate students. Professor LOOS and Dr. SHAMBAUGH.

Throughout the year, Mon., Wed., Fri. at 9.

7. Public Finance. A study in state expenditure, state income, and state debts. The class will read Bastable's Public Finance. Open to those who have taken Course 2 or its equivalent. Professor LOOS.

Fall term, Tu., Th. at 9.

8. Taxation. This course is designed as a continuation of Course 7 for those who wish to do further work in public finance, and will be conducted as a research course. Papers will be prepared first on the literature of taxation; these will be followed by a series of special studies in existing systems of taxation, national commonwealth and local. Professor LOOS.

Winter and spring terms, Tu. and Th. at 9.

9. History of Political Economy. Economic history in the fall term with special reference to the medieval systems of industry, the appearance of the modern era, and the writings of the mercantilists and physiocrats. Economic theory in the winter and spring terms with notice of Smith, Malthus, Ricardo and contemporary schools. For Seniors and Graduates. Professor LOOS and Dr. SHAMBAUGH.

Throughout the year, hours to be appointed.

10. Debating Course. May be counted also as an English elective. Selected topics in economics and politics. The course may not be given in 1897-98. Mr. KELLY and Dr. SHAMBAUGH.

Fall and winter, hours to be appointed.

PUBLIC LAW AND ADMINISTRATION.

11. Historical and Descriptive Politics. A study, historical and descriptive, of the governments of Greece, Rome, France, Germany, England and the United States. Fall term: Beginning with the primitive institutions of the Patriarchal Family and the Village Community, political evolution will be traced through Greece, Rome (City and Empire), Mediaeval Europe, France and Germany. Winter term: The general outlines of political evolution in Switzerland, England and the United States. Spring term: The development of local government, especially in the United States, will receive detailed consideration. Dr. SHAMBAUGH.

Throughout the year, Mon., Wed., Fri., at 8.

12. Principles of Government in the United States. A study, legal and political, of constitutional government in the United States, wherein the Constitution of the United States will receive special examination. Open to Juniors and Seniors. Dr. SHAMBAUGH.

Throughout the year, Tu., Th. at 10, (third hour to be appointed).

13. Principles of Government in the United States. A special course, supplementing Course 12, wherein the principles of government in the United States will be studied through primary sources: colonial charters, commonwealth constitutions, leading state papers prior to 1787, the Federalist and other contemporaneous essays on the Constitution, leading state papers and political documents from 1787 to 1870, the important speeches of Jackson, Webster, Calhoun and Lincoln, ordinances of secession, etc. Open to Juniors and Seniors. Dr. SHAMBAUGH.

Throughout the year, two hours a week.

14. International Law. Lectures on international law given in alternate years. Snow's Cases on International Law will be used as a text. The course was given in 1896-97. Open to Juniors. Chancellor MCCLAIN.

Spring term, Tu., Th., at 11.

15. Diplomacy and Foreign Relations. The consular and diplomatic service with some notice of customs tariffs. Professor LOOS.

Spring term, Mon., Wed., Fri., at 11.

16. Political Theory and Comparative Constitutional Law. The outlines of political theory will be presented in the fall term. A comparative study of the leading features of the constitutions of the United States, England, France and Germany will be undertaken in the winter and spring terms. Open to those who have had Courses 11 and 12. An advanced course for Seniors and Graduates. Dr. SHAMBAUGH.

Two hours through the year.

17. Administrative Law. A comparative study of administrative law in France, Germany, England and the United States. Open to those who have taken Courses 11, 12 and 16. Dr. SHAMBAUGH.

Fall term, two hours to be appointed.

18. Government in Iowa. A study, historical and descriptive, of the political institutions of the commonwealth of Iowa. Dr. SHAMBAUGH.

Spring term, two hours to be appointed.

19. Roman Law. The history and institutions of the classical and Justinian law. Lectures with assigned readings. For Seniors and Graduates. Dr. HARRIS.

Fall and winter terms, Th., at 1:30.

20. Roman Municipalities. Lectures. For Seniors and Graduates. Professor ROHBACH.

Fall or winter, two hours to be appointed.

21. Municipal Government. A study in administration. This course is for those who have taken Course 23. Professor LOOS.

Spring term Mon., Wed., Fri., at 10.

22. Political Philosophy. A study in political theory, classical and modern, with some notice of state forms. Lectures with critical reading of Aristotle's Politics during the fall term; and Green on Political Obligations and Sidgwick's Elements of Politics during the winter and spring terms. Primarily for Graduates. Professor LOOS.

Throughout the year, Tu., Th., at 10.

23. Sociology. Part 1. Lectures during the fall term on the primary factors and forces of social pheonomena; special attention is given to the earliest phases of political organization. Part 2. In the winter term, police, sanitation, pauperism, and crime receive special attention. The close relation of the so-called practical sociology to the German Verwaltungslehre will be pointed out. Open to Seniors and Graduates. Professor LOOS.

Fall and winter terms, Mon., Wed., Fri., at 10.

24. Seminary in Political Science. It is the aim of the Seminary to encourage special investigations. Questions in politics, economics, statistics, finance, administration or law may be taken for special research. From time to time papers are read, and then familiarly criticised and discussed. Primarily for Graduates. Professor LOOS and Dr. SHAMBAUGH.

Throughout the year, hours to be appointed.

PHILOSOPHY.

PROFESSOR PATRICK; ASSISTANT PROFESSOR GILBERT.

1. Logic. An elementary course in deductive and inductive logic. In the fall term deductive logic will be studied with the aid of Jevons' Lessons in Logic as a text. In the winter term inductive logic will be studied by means of lectures and readings in Hibben's Inductive Logic and Jevons' Principles of Science. Either term may be taken alone. Professor PATRICK.

Fall and winter terms, two hours.

2. Psychology. An elementary course in general psychology. In the fall term Dr. GILBERT will lecture on the nervous system, localization of brain function, the special senses and sensations. Practical study and dissection of the sheep's brain will accompany the lectures on the nervous system. In the winter and spring terms Professor PATRICK will lecture on general psychology. This course will be accompanied by experimental exercises and by demonstrations with apparatus from the psychological laboratory. The texts of James, Kuelpe, Wundt, and Ladd will be used as references and for assigned readings. Professor PATRICK and Dr. GILBERT.

Throughout the year, three hours, two sections.

3. History of Philosophy. A course in Greek, mediaeval and modern philosophy. Lectures, with assigned readings in the texts of Zeller, Weber, Falckenberg and Erdmann. Professor PATRICK.

Throughout the year, three hours.

4. Ethics. Lectures, discussions, and recitations. Mackenzie's Manual of Ethics will be used as a text-book. Dr. GILBERT.

Spring term, three hours.

5. Laboratory Course in Experimental Psychology. An introductory course whose aim is to familiarize the student with the use of psychophysical apparatus and methods of experimental research in psychology. Dr. GILBERT.

Fall and winter, two hours, or four hours laboratory work.

6. The Psychology of the Child. The methods and results of child study. This course will be introduced by a short course on comparative psychology. Lectures and reports. Dr. GILBERT.

Spring term, two hours.

7. The Philosophy of Nature. The principal subjects discussed will be final causes, the philosophy of evolution, and materialism. This course is primarily for Graduates. Lectures, theses, and private readings. Professor PATRICK.

Fall term, two hours.

8. Abnormal Psychology. The principal subjects discussed will be sleep, dreams, somnambulism, hypnotism, automatism, alterations of personality, telepathy, and psychical research. This course is primarily for Graduates. It may be taken by undergraduates who have proper preparation. Lectures, theses, and private readings. Dr. GILBERT.

Winter term, two hours.

9. Special Research in Psychology. Original investigations of special problems in normal and abnormal psychology and child study. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *Studies in Psychology*. This course is primarily for Graduates. It may be taken by undergraduates who have had Courses 2 and 5. Dr. GILBERT.

Throughout the year, hours to be arranged.

10. **Seminary in Psychology.** Reports and discussions upon advanced problems in psychology, such as the nature of the mind, theory of knowledge, the relation of mind and body, and kindred subjects. This course is primarily for Graduates. It may be taken by undergraduates who have had Courses 2 and 5. Dr. GILBERT.

Winter term, two hours.

11. **Seminary in Philosophy.** Papers and discussions upon special problems in philosophy. The subjects studied the past year were pessimism, the philosophy of India, and mysticism. This course is primarily for Graduates. but may be taken by special permission by undergraduates with full preparation. Professor PATRICK.

Winter term, two hours.

Candidates for the degree of Bachelor of Philosophy are required to take the equivalent of three terms' work of two or three hours each in this department. Courses 1 and 2 are recommended for this requirement.

The Psychological Laboratory, No. 14 North Clinton street, is open daily from 8 to 12 A. M., and from 2 to 4 P. M. A description of the laboratory and apparatus will be found in this catalogue under the head of Material Equipment of the Collegiate Department. The library of philosophy is supplied with all the standard works in logic, psychology, ethics, and philosophy, and is open daily during laboratory hours.

PEDAGOGY.

PROFESSOR MCCONNELL; MR. DORCAS.

1. **General Pedagogy.** This course is designed primarily for students who have had no teaching experience. This will be a text-book course and will consist of a general treatment of the principles and practice of school teaching. The text-books used in this course are Putnam's Manual of Pedagogics, Gregory's Seven Laws of Teaching, White's School Management, Prince's Courses and Methods. The course is open to all students who are permitted by the rules of the University to take elective courses. Professor MCCONNELL and Mr. DORCAS.

Throughout the year, five hours a week.

2. Philosophy of Education and Practice of Teaching. Lectures and recitations. It is the purpose in this course to set forth the aims of education, as these aims have been developed in educational history, also to treat somewhat fully the doctrines of the eductional leaders of recent times, and finally to illustrate the application of these doctrines in teaching. Fall term: Educational Aims and Doctrines. Comenius, Pestalozzi, Froebel, Herbart. This part of the course will include a special treatment of the Herbartian Pedagogy and a discussion of educational values. Winter term: Teaching and Governing. This part of the course will embrace a treatment of the Formal Steps of Instruction, an exposition of methods of teaching and lectures on sanitation. Spring term: Secondary Education. In this part of the course, attention will be given to the organization of courses of study and methods of instruction in high schools. Professor McCONNELL.

Throughout the year, three hours a week.

3. History of Education. This course will consist of three distinct parts. (*a*) The ancient and mediæval period, (*b*) the modern period, and (*c*) the history of education in the United States. The course will consist of lectures, recitations and essays on assigned topics. Mr. DORCAS.

Throughout the year, two hours a week.

4. School Supervision. In this course the student will be expected to make a study of the following subjects: General school management, the art of classifying schools, and the art of arranging courses of study. Lectures and recitations. Professor McCONNELL.

Winter term, two hours a week.

5. School Systems. This course will require of the student an examination of the state and city systems of the United States. Lectures and reports. Professor McCONNELL.

Fall term, two hours a week.

6. Child Study. In this course the history, literature and methods of work in child study will be treated. Professor McCONNELL.

Spring term, two hours a week.

7. Seminary. The seminary will afford an opportunity for the special investigation of subjects selected with reference to their bear-

ing on Courses 2 and 6. Fall and winter: The doctrines of the Herbartian school. Spring: Child study. Professor McCONNELL.

Throughout the year, two hours a week.

NOTE.—The courses in Pedagogy, expect as otherwise designated, are open to Juniors, Seniors, and special students. Candidates for the degree of Bachelor of Didactics are required to take three full terms' work in Pedagogy.

State Certificate. Acting under a law passed by the Twenty-third General Assembly, the State Board of Educational Examiners will grant state certificates, good for five years, to graduates of the Collegiate Department of the University who comply with the following conditions:

(*a*) The applicant must take three full terms' work in Pedagogy at the University.

(*b*) He must furnish written statements, prepared expressly for the Board, from one or more county superintendents, or other experienced educators, certifying to the professional success and good moral character of the applicant.

(*c*) He must furnish written official statements, addressed to the Board, from school boards, or directors, for whom the candidate has taught, certifying to his success in teaching and government.

(*d*) He must apply to the Board through the Professor of Pedagogy, to whom he shall send, in addition to the above described certificates, a formal application for a state certificate, the sum of three dollars and such other credentials as may be required. The application for a state certificate should be made by using the blank form provided for that purpose by the State Board of Examiners.

(*e*) All the papers and credentials required from candidates for state certificates must be filed with the President of the University at least thirty days before the date fixed for the examination.

Life Diploma. The State Board of Educational Examiners grants life diplomas, according to law, to graduates of the University who have complied with the state certificate conditions mentioned above, and who, in addition thereto, have had a successful teaching experience of five years after graduation. Applications are to be made through the Professor of Pedagogy. The following are the regulations of the Board in reference to such applicants:

(*a*) The Board itself holds the right, which it exercises at discretion, to investigate the character, scholarship, and professional standing of every applicant.

(*b*) The candidate must present an original thesis *in his own handwriting*, of not less than 3,000 nor more than 5,000 words, upon some professional topic selected by the President of the Board. The thesis will be subjected to a critical examination by at least two persons chosen by the Board.

(*c*) The credentials required, the registration blank properly filled, and the thesis, accompanied by the fee of five dollars, must be filed with the President of the University at least thirty days before the date fixed for examination.

PHYSICS.

PROFESSOR VEBLEN; MR. BOWMAN, MR. BAILEY AND MR. WILLIS.

1. **Mechanics and Heat.** Lectures and recitations. Professor VEBLEN.

Fall term, daily at 11.

2. **Electricity and Magnetism.** Lectures and recitations. Professor VEBLEN.

Winter term, daily at 11.

3. **Sound and Light.** Lectures three times a week, laboratory work twice a week. Professor VEBLEN, Mr. BOWMAN, Mr. BAILEY and Mr. WILLIS.

Spring term, lectures Mon., Wed., Fri., at 11.

Courses 1, 2 and 3 constitute the general elementary work in physics required of all scientific and engineering students, and must be preceded by the mathematics of the Freshman year.

4. **Physical Measurements and Observations.** Laboratory work. Mr. BOWMAN and Mr. BAILEY.

One term, daily.

5. **Measurements and Determination of Constants.** Lectures and laboratory work. Professor VEBLEN, Mr. BOWMAN and Mr. BAILEY.

One term, daily.

6. Measurements. Special investigation and research to follow 4 and 5. Professor VEBLEN and Mr. BOWMAN.

Courses 4, 5 and 6 may be taken any term, but must be pursued in the order of their numbers. These courses are planned for students taking a second year in Physics. Course 4 is required of electrical engineering students in the fall of their Junior year. In the winter of the same year they take 5, but in their case this course deals more especially with electrical measurements.

7. Direct Current Dynamos and Motors. Three lectures a week, laboratory work twice a week. For electrical engineering Juniors. Professor VEBLEN and Mr. BOWMAN.

Spring term, daily.

8. Theory of Electricity and Photometry. Lectures five times a week, laboratory work ten hours. Professor VEBLEN and Mr. BOWMAN.

Fall term.

9. Alternate Current Machinery. Five lectures a week, ten hours of special laboratory work. Professor VEBLEN and Mr. BOWMAN.

10. Distribution of Electrical Energy; Telegraph and Telephone. Lectures and laboratory work. Professor VEBLEN and Mr. BOWMAN.

Spring term, ten hours a week.

The last three numbers form the Senior year course of the electrical engineers, and will in general include five lectures a week, the subjects treated being indicated above. The work in the laboratory consists of practice with the photometer, experiments and measurements on the various machines, transformers, and other apparatus, and tests of insulators, conductors, samples of iron, etc. The student has the choice in the latter part of the year of preparing a thesis or carrying out some research, or doing other special work.

11. Electricity and Magnetism. For civil engineering students, Two lectures a week, laboratory work three times a week. Professor VEBLEN and Mr. BOWMAN.

Fall term, daily.

12. Dynamo-electric Machinery. Lectures to civil engineering students. Professor VEBLEN.

Winter term, three times a week.

13. Heat and Thermodynamics. Lectures to Junior electrical and civil engineering students. Mr. BOWMAN.

Spring term, twice a week, with one day each week in electrical laboratory for civil engineers.

14. Shop Work. For electrical engineers. Mr. BOWMAN and Mr. WILLIS.

Throughout the year, twice a week.

15. Seminary. The systematic reading of physical and electrical journals by those students who are well enough equipped, is encouraged by a weekly seminary, conducted for this purpose by Professor VEBLEN.

In addition to the above, lectures and laboratory courses in selected topics will be given as circumstances may require or the facilities for instruction may admit. Laboratory work of any grade may be taken any term, three or more times a week.

CHEMISTRY.

PROFESSOR ANDREWS, MR. ENDE AND MR. JACKSON.

1. General Chemistry. Lectures illustrated by experiments and accompanied by a weekly quiz and laboratory work. Professor ANDREWS.

Fall term, four times a week, laboratory once a week.

2. General Chemistry (*continued*). Lectures illustrated by experiments. Introduction to qualitative analysis. Laboratory work, six hours a week. Professor ANDREWS and Mr. ENDE.

Winter term: Lectures Tu., Th., at 9. Laboratory at hours to be arranged.

3. General Chemistry and Qualitative Analysis. Lectures once a week, laboratory work eight hours. The student is instructed in the theory and practice of Qualitative Analysis and is expected to carry out about twenty-five complete analyses besides a number of

partial ones. This course except the lectures can be taken in any term. Professor ANDREWS, Mr. ENDE and Mr. JACKSON.

Spring term, lectures at 9, laboratory eight hours, at times to be arranged.

4. **Quantitative Analysis.** Lectures on general principles and sources of error once a week, laboratory ten hours. Professor ANDREWS and Mr. JACKSON.

Lectures Tu., at 4:30, laboratory according to arrangement.

5. **Quantitative Analysis.** Laboratory practicum. The student extends his work from the analysis of substances of definitely known composition to commercial products of various kinds and makes a study of certain technological methods. Professor ANDREWS and Mr. JACKSON.

Any term, ten hours a week.

6. **Theoretical and Physical Chemistry.** Lectures on the general principles of thermo-chemistry, electro-chemistry and chemical dynamics, accompanied by a parallel course of laboratory work covering, for example, the determination of molecular weights, experimental study of the laws of Avogadro and Dulong and Petit, the phenomena of mass action and of dissociation. Ostwald's Outlines of Physical Chemistry has hitherto been used as an auxiliary text. This course must be preceded by at least the first three courses in chemistry and the first three in physics or their equivalent. It will probably only be given in the even numbered years. Professor ANDREWS.

Spring term, lectures or laboratory work daily at hours to be arranged for.

7. *a.* **Organic Chemistry.** Lectures on the fatty series, illustrated experimentally so far as the subject will permit. Professor ANDREWS.

Spring term, even numbered years, twice a week.

7. *b.* **Organic Chemistry.** Lectures on aromatic and heterocyclic compounds. Professor ANDREWS.

Spring of odd numbered years, thrice a week.

8. **Electro-chemistry.** Lectures for students of electrical engineering, comprising the theory of electrolysis, chemistry of primary

and secondary batteries, electro-metallurgy and other industrial applications. Professor ANDREWS.

Spring term, five times a week, even numbered years only.

9. **Organic Preparations.** Laboratory work comprising preparation of typical organic compounds, methods of synthesis and study of diagnostic reactions. This course must be preceded or accompanied by Course 7. Professor ANDREWS.

Winter term, laboratory daily, twelve hours a week.

10. **Determinative Mineralogy and Crystallography.** Laboratory practicum. Mr. ENDE.

Winter and spring, five times a week.

Numbers 3, Qualitative Analysis, and 4, and 5, Quantitative Analysis, may be taken in either fall, winter, or spring term.

Number 6, may be taken after 3. This order is only recommended to those who devote no more than four terms in all to chemistry.

ANIMAL MORPHOLOGY AND PHYSIOLOGY.

ASSISTANT PROFESSOR HOUSER, MR. BURGE.

1. **General Morphology and Physiology.** A laboratory course for the study of selected types representing the several great groups of animals. General biological phenomena, the unicellular animals, and representatives of the higher invertebrate groups. (Fall term). Dissection of typical vertebrates, the microscopic morphology of vertebrates, and lectures and experiments covering the elements of physiology. (Winter and spring terms.) Assistant Professor HOUSER.

Throughout the year; daily; two divisions, 10 to 12 and 1:30 to 3:30.

2. **Microtomy.** Laboratory work. The student makes a practical application of standard methods of fixing, hardening, staining, injecting, imbedding, sectioning, and mounting. Methods of drawing and reconstruction are also considered. Prerequisite: Course 1. Assistant Professor HOUSER and Mr. BURGE.

Fall term, daily, 8 to 10.

3. Comparative Neurology. A study of the central nervous system and the terminal sense organs. The laboratory work involves the use of the technique of Golgi, Weigert, and other special means of investigation peculiar to the subject. Lectures are given twice a week, and assigned reading is done in the standard authorities. Prerequisite: Courses 1 and 2. Assistant Professor HOUSER and Mr. BURGE.

Winter term, daily, 8 to 10.

4. Practical Physiology. A course of laboratory work for advanced students. References are constantly made to the standard texts. Prerequisite: Course 1. Assistant Professor HOUSER.

Fall and winter terms, daily, time to be arranged.

5. Vertebrate Embryology. Laboratory work accompanied by a series of lectures. The lectures discuss the general problems of vertebrate embryology, and are supplemented by collateral reading. The laboratory work embraces the study of the chick at different stages of development. Prerequisite: Courses 1 and 2. Assistant Professor HOUSER and Mr. BURGE.

Spring term, daily, 8 to 10.

6. Thesis Course. A course involving the preparation of a graduating thesis. Opportunities are offered for laboratory work in some branch of anatomy, histology, or embryology. Prerequisite: Courses 1, 2 and 5. Assistant Professor HOUSER.

Time to be arranged.

7. Research Course. Facilities for original investigation will be provided for those who elect work in this subject as a major in a graduate course. The specific character of such work will be determined by individual considerations, but, in general, a problem will be assigned for independent investigation through the use of refined laboratory methods. Candidates for this work should have completed the undergraduate courses 1, 2 and 5, at least, or the equivalent. Assistant Professor HOUSER.

ZOOLOGY.

PROFESSOR NUTTING; ASSISTANT PROFESSOR WICKHAM.

1. **Invertebrated Animals**—more especially the sub-kingdoms, *Coelenterata, and Echinodermata.* Fall term. Professor NUTTING.

2. **Mammalia.** The principles of classification are here applied to a more limited group. More attention is paid to generic and specific characters and more detailed descriptions are made, daily practice being afforded by the use of the magnificent series of mammals in the Hornaday collection and main Museum. Instruction in the preparation of skulls and skeletons is given to those students desiring it. Winter term. Professor NUTTING.

3. **Ornithology,** including instructions in field work. Upon this course the whole work in systematic zoology is centered. Owing to the very large series of birds (about 11,000 specimens) in the Museum, there is ample material for real systematic work during the term. Spring term. Professor NUTTING.

4. **Entomology.** Fall term. Assistant Professor WICKHAM. Insect Anatomy and Development. Lectures and laboratory work. Three hours a week.

5. **Entomology.** The principles acquired in the preceding term. will be applied to the study of systematic entomology. Three hours a week. Winter term, Assistant Professor WICKHAM.

6. **Entomology.** The studies of the preceding term will be continued. Throughout this and the preceding course special attention will be given to the philosophical bearings of the subject. Three hours a week. Spring term. Assistant Professor WICKHAM.

7. **Lectures in Speculative Zoology.** This course is devoted to a presentation of the more prominent theories concerning the origin and evolution of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts, and intelligence of animals. The course will continue through the year and will be open to Juniors and Seniors. Two hours a week. Professor NUTTING.

8. Thesis. Equivalent to two terms' work. Advanced work in any group of animals of which the Museum contains a sufficient series. Free access to any specimens or books on the Museum floor is accorded to students doing thesis work in zoology, and a convenient study room has been fitted up for the use of advanced students.

The above courses are intended to be consecutive, except that courses 4, 5 and 6 may follow 1, 2 and 3, in Animal Morphology, and 7 may be taken by Juniors and Seniors, without previous work in natural science. A combination of Courses 4, 5, 6 and 7 is recommended for students desiring a five hour course which will include a critical study of a definite group of animals together with the application of biological principles elucidated in Course 7. This course is more particularly designed in the interest of students who do not intend to specialize in Zoology.

The Museum affords an abundance of material for study, and this is supplemented by (*a*) a library of zoological works. (*b*) Photographs of specimens studied, the photographs to be placed in the note books along with the descriptions, and (*c*) Lectures in which the salient points of the various groups of animals are defined, and habits, distribution, etc., described.

Students taking special courses in biological science may receive instruction in *field work* and in the *preparation of museum material.*

GEOLOGY.

PROFESSOR CALVIN.

1. **Principles of Geology.** Lectures, illustrated by museum specimens, views, maps and microscopic preparations.

Throughout the year, twice weekly, Tu. and Th., at 9.

This course may be supplemented with Course 1 in Astronomy.

2. **General and Practical Geology.** During the fall term this course embraces lectures and field observation on the geological phenomena in the vicinity of Iowa City as an introduction to the

fundamental facts of the science. The preliminary work also embraces the laboratory investigation of material collected during studies in the field. This is followed by the general facts of rock-making, continent-making, and the evolution of topographic forms. During winter and spring terms attention is given to the chronological succession of strata in the Mississippi Valley, with studies relating to the genesis, lithology, geographical distribution, economic products, and typical faunas of the several formations. Large series of rocks, minerals, fossils, maps, lantern slides, and photographs afford the material for lecture illustration and laboratory study.

Throughout the year, daily at 10. Additional hours for laboratory work arranged to suit the convenience of the individual students.

3. **Invertebrate Paleontology.** Lectures and laboratory research.

Throughout the year, daily. Lectures at 8. Laboratory work at convenient hours from 8 to 5.

4. **Economic Geology of the United States.** Lectures, with library and laboratory research.

Throughout the year daily.

5. **Special Courses in Pleistocene Geology,** local Geology and Paleontology, Characteristics and Faunas of Special Formations, and similar subjects are arranged to meet the wishes of individual students.

Throughout the year or through a single term, two, three, or five hours weekly.

BOTANY.

PROFESSOR MACBRIDE; ASSISTANT PROFESSOR SHIMEK.

1. **General Botany.** This course includes lectures and laboratory work, and is intended to give a general view of botanical science. Lectures, accompanied by abundant demonstrations and laboratory work, present a more or less complete view of the world of plants. Special attention is paid to all available forms of our cryptogamic flora, slimemoulds, schizophytes, diatoms, algae, fungi, mosses

ferns, and their allies are successively passed in review. This course is open to all students who are credited with Botany in their preparatory course. While it is in some particulars a review of the preparatory courses, it is also made the basis of work in the subsequent courses. Fall term, ten hours a week. Professor MACBRIDE and Assistant Professor SHIMEK.

2. **General Plant Histology. General Structural Botany.** This course requires ten hours a week in the laboratory. Daily lectures accompany the laboratory work. The student receives special instruction in the preparation of vegetable sections, staining, mounting, etc., and is required to prepare for himself approved slides in illustration of all the topics presented in so far as these are referable to the microscope. Winter term. Professor MACBRIDE and Assistant Professor SHIMEK.

3. **General Plant Physiology.** This course consists of lectures, laboratory work, and experiments, supplemented by collateral reading. The most important problems of vegetable physiology are discussed and illustrated by simple experiments. Detmer, Vines, Darwin, and all other standard authorities are available to the student for collateral reading. Spring term. Assistant Professor SHIMEK.

4. **General Mycology.** This is a course in the fungi and consists of laboratory work, supplemented by lectures, experiment, and collateral reading. This is an advanced course. Students make and classify collections for themselves. In identifying material collected, students are aided by extensive mycological literature, *exsiccati*, etc. Fall term. Professor MACBRIDE.

5. **Vegetable Embryology.** A special course with lectures and laboratory work, including collateral reading. This course is confined chiefly to the consideration of the embryology of phenogamous plants. Phytocytology is taken up incidentally, and the peculiarities of nuclear division and karyokinesis noted. Spring term. Professor MACBRIDE.

6. **Special work in Morphology.** A course designed for advanced students either graduate or special, offering opportunity for more exact investigation. Throughout the year. Professor MACBRIDE and Assistant Professor SHIMEK.

7. **Special Systematic work.** The large collections of the University now afford unusual opportunity for the special study of particular groups and families, and students are invited to engage in original research in the revision of accumulated species. Throughout the year. Professor MACBRIDE and Assistant Professor SHIMEK.

8. **Special Applied Botany.** A course for students of Pharmacy and Medicine. The official *Materia Medica* is made the basis of the special study of medicinal plants, their nature, origin, and relationships. Winter and spring terms. Professor MACBRIDE.

9. **Thesis Course.** Designed for such students, either graduate or others, as desire to undertake problems of original research. Summer and winter terms. Professor MACBRIDE and Assistant Professor SHIMEK.

MATHEMATICS.

PROFESSOR WELD; ASSISTANT PROFESSOR SMITH; MR. BAUER AND MR. MERRITT.

Classical and Philosophical students are required to take Course 1. Course 2 may however be substituted for this and the work otherwise required in Ancient History. Scientific students must take Course 2. The work of Course 3, though not required, is arranged with reference to the needs of those students who expect to do special work in Physical Science. Civil and Electrical Engineering students are required to take Courses 2, 4 and 6, *a*. *b*. Further explanations will be found in connection with the following syllabus.

Solid and Spherical Geometry. To be given twice during the year as follows: *Fall term:* from October 4, to November 24, daily, except Friday, at 4:30. Mr. BAUER. *Winter term:* from January 10, to March 2, daily, except Friday, at 3:30. Mr. MERRITT. This course will not be given after the Collegiate year 1897–8.

Freshman Mathematics for Classical and Philosophical Students.

1. *a*. **Algebra.** Exercises in the statement and solution of problems involving simple and quadratic equations; ratio, proportion, and

variation; arithmetical, harmonic, and geometrical progressions; properties of series and the development of simple functions into series; the binomial theorem; logarithms. Fall term.

b. **Plane Trigonometry.** Trigonometric functions and formulæ; logarithmic functions; solution of right and oblique angled triangles; practical applications. Winter term.

c. **Analytical Geometry.** The point, right line, circle, parabola, ellipse, and hyperbola in cartesian coordinates. Spring term.

Three divisions; throughout the year, Mon., Wed., Fri., at 11, 2:30, and 3:30 Mr. BAUER and Mr. MERRITT.

Students contemplating advanced study in Mathematics should take Course 2, instead of the one here outlined.

Freshman Mathematics for Scientific and Engineering Students.

2. *a.* **Algebra and Trigonometry.** In Algebra the work is nearly the same as that of 1 *a*. This is to be completed by November 12 and will be followed by Plane Trigonometry. Fall term.

b. **Trigonometry and Theory of Equations.** Trigonometry is to be completed by January 28. The work in the Theory of Equations will include the study of imaginaries, the properties of the general equation and their graphical representation, methods of approximating to the roots of higher equations with numerical coefficients, Cardan's solution of cubics, and bi-quadratic equations. Winter term.

c. **Analytical Geometry.** The same as Course 1 *c*, with the addition of the discussion of the general equation of the second degree between two variables and examples of higher plane curves. Spring term.

Five divisions, daily, throughout the year at 8, 9, 10 and 2:30. Assistant Professor SMITH, Mr. BAUER and Mr. MERRITT.

Sophomore Mathematics for Scientific Students.

3. *a.* **Differential and Integral Calculus.** The fundamental principles of the Calculus are studied and applied to the solution of problems in geometry and mechanics. Fall term.

b. **Integral Calculus and Method of Least Squares.** Winter term.

c. **Applications of the Method of Least Squares.** This is a continuation of the preceding, the method of least squares being applied to the reduction of various series of physical observations. Spring term. Assistant Professor SMITH.

This course is open only to those who have taken Course 2. Daily throughout the year at 8.

Sophomore Mathematics.

4. *a.* **Analytical and Modern Geometry.** A review of those portions of Course 2 *c* which are supplementary to Course 1 *c*, followed by Analytical Geometry of three dimensions. A short course of lectures on Modern Geometry is given, upon which full notes must be submitted. Fall term.

b. **Differential Calculus.** Winter term.

c. **Integral Calculus.** The work in Calculus in this course is nearly the same as that in Course 3. Spring term.

This course is intended primarily for engineering students but is open to all who have completed the required work of the Freshman year. Mr. BAUER.

Daily throughout the year at 10.

Mathematics for Junior, Senior and Graduate Students.

5. Integral Calculus. *a.* Hyperbolic Functions and Definite Integrals. Fall term. *b.* The Eulerian and Elliptic Integrals. Winter term. *c.* Differential Equations. Spring term. An elementary course open to all students who have taken either Course 3 or 4. For either undergraduate or graduate students. Professor WELD.

Three hours a week throughout the year, Mon., Wed., Fri., at 11, supplemented by a weekly seminary.

6. Higher Calculus. *a.* Harmonic Functions. Lectures. This will, as soon as possible, be made a separate course running through the year. Fall term. *b.* Theory of Functions. Winter term. *c.* Differential Equations. A more advanced course than 5 *c*. For graduate students. Professor WELD.

Two hours a week throughout the year, Tu., Th., at 11; supplemented by a weekly seminary.

7. Determinants and Modern Geometry. For either undergraduate or graduate students. *a.* Determinants and the Theory of Quantics. Fall term. *b.* Modern Geometry; the principle of *Invariance*. Winter term. *c.* Modern Geometry of three dimensions, or Quaternions. Spring term. Professor WELD.

Two hours a week throughout the year, Tu., Th., at 2:30; supplemented by a fortnightly seminary.

8. Analytical Mechanics. *a.* Statics. Composition and resolution of forces, the funicular polygon, centers of gravity, moment of inertia; friction, etc. Fall term. *b.* Kinetics. Rectilinear motion, projectiles; constrained motion of a particle, the simple and conical pendulums; etc. Winter term. *c.* Mechanics of fluids. An elementary course. Spring term. For either undergraduate or graduate students. Required of Civil and Electrical Engineering students. Assisant Professor SMITH.

Two hours a week throughout the year, Tu., Th., at 11; supplemented, for Civil Engineering students, by a three hours course in applied mechanics in charge of Professor MAGOWAN (See Course in Civil Engineering) and, for special students in mathematics, by a weekly seminary.

9. Advanced Analytical Mechanics. *a.* Problems in statics and dynamics; virtual velocities; the principle of least action, etc. Fall term. *b.* The dynamics of a particle, with special reference to the theory of orbital motion. Winter term. *c.* Hydromechanics. This must be preceded by course 6, *a*. Spring term. For graduate students. Professor SMITH.

Three hours a week throughout the year, Mon., Wed., Fri. at 11; supplemented by a weekly seminary.

ASTRONOMY.

PROFESSOR WELD, MR. ———.

The courses in Astronomy are open to all Juniors and Seniors. The two here offered may be taken simultaneously or in succession. Others will be added as soon as the necessary arrangements can be made.

The University is provided with a small but well equipped students' observatory.

1. **General Astronomy.** A course of popular lectures on descriptive astronomy for the general student. This course may be supplemented by Course 1 in Geology, which is given at the same hour. Professor WELD.

Three lectures a week throughout the year; Mon., Wed., Fri. at 9.

2. **Practical Astronomy.** The student is taught the use of the sextant, transit instrument, clock, chronograph, etc., the arrangement of the *American Ephemeris and Nautical Almanac;* and the general principles of time, latitude, longitude, and azimuth determination. Professor WELD and Mr. ———.

Two hours a week throughout the year, Tu., Th., at 9; supplemented by work at the observatory.

CIVIL ENGINEERING.

PROFESSOR SIMS; ASSISTANT PROFESSOR MAGOWAN; MR. HARTMAN.

All the subjects will be given at definite hours, and students will not be allowed to substitute other subjects for the required Civil Engineering studies as specified, without special permission of the Faculty and the approval of the professor in charge. Students of one class will not be allowed to take subjects in an advanced class without permission of the professor in charge.

So far as possible, instruction will be given by recitations from textbooks. But where this method is not practicable, as in limes and cements, and in some of the subjects treated under the head of Civil Engineering, a text will be followed, the first part of the recitation period being devoted to a quiz, and the remainder to a lecture.

Saturdays, throughout the four years of the course, are devoted in part to field work, photography, and blue printing—including the making of sensitized paper; also to work in the carpenter shop. The latter consists chiefly in making models of the structures designed in the Senior year, and in practical joinery. For all work requiring no

special preparation outside of class room, such as drawing, field work, laboratory exercises, some of the work in graphical statics, etc., two hours will be required for one hour of credit.

French or German. See Course 1, under French, page 38; and Courses 1 and 2, under German, page 36. If French be elected in Freshman year, English must be taken in Sophomore year; but should German be elected, it must be continued through the Sophomore year. Freshman year, five hours a week, and Sophomore year, three hours a week.

Mathematics. See Courses 2, 3, or 4 and 7, under Mathematics, pages 67, 68 and 69. Freshman and Sophomore years, five hours a week.

English. See Courses 1 and 4, under English, page 41. For those electing French, two hours a week through the Freshman, and three hours a week through the Sophomore years; and for those electing German, two hours a week through the Freshman year.

Drawing. For General Scientific, Electrical and Civil Engineering students. Geometrical and Mechanical Drawing. Orthographic, oblique, isometric and cabinet projections, and lettering. Linear perspective, shades and shadows. The work is given principally by means of personal instruction. The preliminary principles are studied from text and reference books and their application is employed in making drawings from models and machinery to exact scale. The course includes for Civil Engineering students work in graphical Arithmetic. Assistant Professor MAGOWAN and Mr. HARTMAN.

Freshman year, fall and winter terms, five hours a week.

Elementary Machine Drawing. For Electrical Engineers. A study in delineation of brackets, shaft-hangers, screws, pillow blocks, gearing and other elementary parts of machines. Assistant Professor MAGOWAN and Mr. HARTMAN.

Freshman year, spring term, three hours a week.

Elementary Surveying. For Civil and Electrical Engineering students. The construction, adjustment and use of the compass, level, and transit. Field practice in surveying, platting of notes and computation of areas. Assistant Professor MAGOWAN and Mr. HARTMAN.

Freshman year, spring term, five hours a week for Civil, and two hours a week for Electrical Engineering students.

Land Surveying. Recitations and lectures, and field work with transit, level, and solar compass; making profiles, leveling and drainage surveys. A section of land is surveyed and the location of all natural and artificial features determined and noted. Assistant Professor MAGOWAN and Mr. HARTMAN.

Sophomore year, fall term, five hours a week.

Mapping and Surveying. Pen topography, including the making of topographical symbols; platting of section survey from notes taken during the previous term, and making a finished map of the same. United States public land surveys, determination of true meridians, and a study of the rules and Supreme Court decisions governing re-surveys and re-locations of lost or obliterated corners. Assistant Professor MAGOWAN.

Sophomore year, winter term, three hours a week.

Topographical Surveying and Mapping. Including a study and the use in the field of Stadia, Gradienter, and Plane table, etc., and the making of finished contour maps. Assistant Professor MAGOWAN.

Sophomore year, spring term, three hours a week.

Descriptive Geometry. The work in this study includes problems on the point, line, and plane. The simpler geometrical solids, shades, and shadows, single and double curved and warped surfaces, and the generation and development of the same. Mr. HARTMAN.

Sophomore year, winter and spring terms, two hours a week.

Electricity and Magnetism. See Course 11, under Physics, page 57. This course is designed especially for the students in Civil Engineering, the object being a better general understanding of this important subject, both in general theory, and in the practice of making electrical measurements; also to give a more thorough knowledge of electricity, preparatory to taking up the study of the Dynamo and Motor, in the winter term, the importance of which to the Civil Engineer is fully appreciated, and the subject is adequately given.

Junior year, fall term, five hours a week.

Analytical Mechanics. See Mathematics, Course 8, page 69.

Junior year, fall and winter terms, two hours a week.

Mechanics of Materials. For students in Civil and Electrical Engineering. The treatment of this subject is designed to be such that the student shall acquire a thorough training in the elementary principles of the Mechanics of Materials, and he is then required to verify by his own investigations, the experimental laws and many of the derived formulæ. Numerous problems taken from actual engineering practice are given for solution from time to time, in order that the student may be trained in the application of his knowledge. The study includes the resistance and elasticity of materials, resistance of pipes and riveted joints, bending and resisting moments, shears, elastic curve, deflection of simple, cantilever, restrained and continuous beams; strength of columns with concentric and excentric loading, torsion and shafting and combined stresses, etc. Assistant Professor MAGOWAN.

Junior year, three hours a week in fall and winter term.

Railroad Curves. The solution of simple and compound curves and turn-outs. Enough field work is given to familiarize the student with the field methods of locating and running curves. Mr. HARTMAN.

Junior year, fall term, three hours a week.

Steam Engine and Locomotive. The subject is treated under four heads, Heat, Steam, Engine, and Boiler. Under Heat is treated the economic combustion of fuel. Under Steam the physical properties and the energy contained. Under Engine the modern types of simple and compound engines are discussed, with special reference to the locomotive. The students are given practical problems and are required to ascertain the indicated horse power from actual indicator cards, and to determine the efficiency of various engines from assigned data. The modern types of boilers are then discussed. Compressed air is also considered in connection with the transmission of power. Professor SIMS.

Junior year, fall term, two hours a week.

Graphical Statics. The course is so arranged that this subject precedes the analytical determination of stresses. The student is thus given a mental photograph of the stresses in various members of structures, and a ready and impressive means of comparison. The analysis, by this method, of roof trusses is first taken up, followed by the plate girder, and simple, continuous cantilever and swing bridges

find the weakest points of the structures and the factor of safety of each member, joint, and fastening. Professor SIMS.

Senior year, fall term, four hours a week. Winter term, two hours a week.

Geology. See Courses 1, 2, and 3, under Geology, pp. 63, 64. Senior year, fall term, five hours a week. Winter term, four hours a week.

Sanitary Engineering. The work offered under this course includes principally, sewers and sewerage, and the cleaning of cities and towns. The separate and combined systems of sewers are studied and discussed. The details of various sewer systems as set forth in plans and specifications for their construction are carefully studied. The cost of construction as taken from current contract prices is especially noted, and the arrangement and action of plumbing fixtures are incidentally studied. The growing importance of this subject is fully realized, and it is the intention to keep the instruction fully abreast of the demands and needs of the present, and if possible, anticipate future needs and methods. Assistant Professor MAGOWAN.

Senior year, fall and winter terms, two hours a week.

Resistance of Materials. For Civil and Electrical Engineers. This subject includes the strength and resistance of engineering materials, their behavior under stress and the methods of their curing and preservation. Professor SIMS.

Senior year, winter term, two hours a week.

Water Supply Engineering. A study of the methods of collecting, purifying, storing, and distributing water; also the designing of a water supply system from assigned data. Assistant Professor MAGOWAN.

Senior year, spring term, three hours a week.

Specifications and Contracts. A study of various standard specifications and a discussion of the effect of general clauses in contracts on same. Professor SIMS.

Senior year, spring term, four hours a week.

Thesis. At the close of the spring term of the Senior year, an acceptable original thesis may be required from each student before graduation.

For more detailed information and description of course send for special announcement of Civil Engineering.

MILITARY SCIENCE AND TACTICS.

LIEUTENANT VOGDES.

Instruction in this department is prescribed for all male students of the Collegiate department, except such as are especially excused. Students who, for any valid reason, may desire to be excused must appear in person before the military committee, consisting of the commandant and five student captains, on the Friday immediately succeeding the beginning of each term. Those who claim exemption on account of physical disability, when the same is not apparent, must present to the committee a certificate from the battalion surgeon. All students not specially excused will report to the Professor on the Monday immediately following the beginning of the term.

ORGANIZATION.

The students are organized for instruction into a battery of artillery consisting of two gun detachments and an infantry battalion consisting of four companies, a band and the necessary staff officers. The commissioned officers are selected from the Senior, the sergeants from the Juniors, the corporals from the Sophomore class. The officers and non-commissioned officers are selected, for character, military record, knowledge of the drill regulations and general aptitude.

UNIFORM.

But one style of uniform is worn, known as the undress or fatigue uniform. It consists of a dark blue suit and is to be worn on all occasions of military duty; it can be procured either before or immediately after being admitted. A detailed description will be furnished on application to the President.

Uniforms can be obtained in the vicinity at a cost of from $12 to $18.

ORGANIZATION OF BATTALION.

1896 - 97.

STAFF AND NON-COMMISSIONED STAFF.

1st Lieutenant and Adjutant.....R. O. Brown.
1st Lieutenant and Quartermaster.....J. Petersberger.
Sergeant Major.....L. A. Swisher.
Quartermaster Sergeant.....H. E. Taylor.

COMPANY "A."

Captain.....G. S. Schaeffer.
1st Lieutenant.....H. H. Hutchinson.
1st Lieutenant.....G. S. Gibbs.
2nd Lieutenant.....I. K. Hull,
1st Sergeant.....F. A. Soleman.
Sergeants.....E. A. Bond.
Lloyd Howell.
J. E. Rederick.
G. M. Rea.
Corporals.....H. Carr.
F. G. White.
F. H. Williams.

COMPANY "B."

Captain.....F. Larrabee.
1st Lieutenant.....Geo. M. Johnson.
2nd Lieutenant.....C. S. Smith.
1st Sergeant.....Geo. H. Carter.
Sergeants.....E. W. Heck.
O. Veblen.
F. Hollingsworth.
J. E. Balle.
Corporals.....Roy A. M. Collins.
H. C. Horack.
L. P. Lee.
E. D. Middleton.

COMPANY "C."

Captain.....B. F. Thomas.
1st Lieutenant.....Frank La Force.
2nd Lieutenant.....S. J. Sayers.
1st Sergeant.....W. N. Stull.
Sergeants.....Ralph Otto.
E. E. Hobby.
John Beardsley.
Corporals.....W. B. Chase.
C. C. Bradley.
C. J. Meier.
C. W. Startsman.

COMPANY "D."

Captain.....C. W. Sears.
1st Lieutenant.....E. Simmons.
2nd Lieutenant.....A. A. Paisley.
1st Sergeant.....J. R. Frailey.
Sergeants.....H. S. Colony.
Mare Johnson.
F. C. Blume.
Corporals.....R. D. Blackmore.
A. J. Burt.
F. C. Neal.
E. H. Yale.

BATTERY.

Captain.....B. D. Willis.
1st Lieutenant.....J. D. Kiser.
2nd Lieutenant.....C. S. Foster.
1st Sergeant.....F. S. Holsteen.
Gunners.....LeRoy D. Weld.
W. H. Eaton.

COURSE OF INSTRUCTION.

The course of instruction is both practical and theoretical.

First Year. Practical instruction: three hours a week, spring and fall terms, 1:15 to 2:15; one hour a week, winter term, 4:30 to 5:30. Practical instruction in Infantry, school of the soldier, company and battalion; extended order and ceremonies; Rifle firing at 100, 200, 300, 500 and 600 yards. Theoretical: one hour a week, winter term, 4:30 to 5:30. Recitations, infantry, drill regulations and manual of guard duty.

Second Year. Practical instruction: Infantry, same as first year; practical instruction: artillery in service of field guns (foot battery) with mechanical movements and saber exercise; rifle firing, same as first year. Theoretical: winter term, one hour a week, 4:30 to 5:30. Recitations, service of security and information.

Third Year. Practical: same as second year. Theoretical: winter term; one hour a week, 4:30 to 5:30. Recitations, tactics and organization.

Fourth Year. Practical: same as above. Theoretical: winter term one hour a week, 4:30 to 5:30. Lectures on the organization of the army of the United States, United States army regulations, preparation of the usual reports and returns pertaining to a company and post. Lectures on military topography and reconnaissance and elementary field engineering.

The following students, members of the graduating class of '96, were reported to the Adjutant General of the Army in compliance with G. O. 15, A. G. O. 1890, as having shown special aptitude for military service: L. T. Jackson, S. C. Smith, C. E. Dakin. The following were reported to the Adjutant General of the State: L. T. Jackson, S. C. Smith, C. E. Dakin, H. E. Radasch, W. H. Clark, R. L. Emry, W. M. Graves, R. M. Arey.

COURSES OF STUDY FOR GRADUATES.

It is the aim of the University to furnish facilities for advanced study commensurate with the demand for such work. As the number of graduate students has increased, especially of candidates for advanced degrees, the courses of study have been extended to meet their needs. No set courses of study leading to the degree of Master of Science are provided, each candidate for one of these degrees pursuing an independent line of study, in which regular University courses are usually combined with special research work, often original in character, laid out with the advice of the professors and carried out under their charge.

The elastic nature of the elective system as here adopted renders the more advanced courses in many branches as valuable to the graduate as to the advanced undergraduate. The Seminaries, for instance, hold out encouragement and opportunities for a great deal of original study and research. The same thing may be said of a number of the higher courses in the different departments. In the following pages will be found grouped together those courses which are of special interest to graduates. In every case courses intended for graduates only (B) are distinguished from those open also to undergraduates (A). To the former, undergraduates are only admitted under exceptional circumstances and subject to the discretion of the professor in charge of the work.

LATIN LANGUAGE AND LITERATURE.

A. Courses open both to graduates and undergraduates.

Courses 5, 6, 15, 17, 18, (See pp. 33 and 34). Professor CURRIER.

Courses 7, 8, 9, 10, 11, 12, 13, 14, (loc. cit.) Mr. POTTER.

B. Courses open to graduates only.

Seminary in Archæology. For 1897–8 the subject will be the Topography and Archæology of Rome and the vicinity. Professor CURRIER.

GREEK LANGUAGE AND LITERATURE.

A. Course open both to graduates and undergraduates.

Plato's Gorgias, Theætetus and selections from the Republic.

B. Course open to graduates only.

Aristophanes: Special attention will be given to the purpose aud influence of Greek comedy, and to its value as a picture of Athenian life.

GERMAN LANGUAGE AND LITERATURE.

B. Courses open to graduates only.

1. German Seminary. This course is devoted to the study of special periods of German literature, of individual authors or of particular literary movements. Professor WILSON.

2. Middle High German. Middle High German Grammar, with a comparison of New High German Syntax and Middle High German Syntax. Selections from the Nibelungenlied, Gudrun and the poems of Walther von der Vogelweide. Professor WILSON.

FRENCH LANGUAGE AND LITERATURE.

A. Courses open both to graduates and undergraduates.

1. History of French Literature. Lectures in the French Language. Text-books: Duval's Littérature française; Montaigne's De l'Institution des Enfans. Professor VAN STEENDEREN.

2. Seminary in 13th Century French Literature. Professor VAN STEENDEREN.

ENGLISH LANGUAGE AND LITERATURE.

A. Courses open to both graduates and undergraduates.

During the year 1897–8 candidates for the master's degree may take work in the following Senior courses:

1. Seminary in the English Novel. See Course 6, under English, p. 41. Professor WAUCHOPE.

2. The English Drama. See Course 7, p. 42. Mr. COOK.

3. The English Essayists and Orators. See Course 10, p. 42. Mr. KELLY.

4. English Literature of the Nineteenth Century. See Course 9, p. 42. Professor WAUCHOPE.

B. Course open to graduates only.

5. Anglo-Saxon. For detailed information see Course 13, p. 43. Professor WAUCHOPE.

6. Gothic and Old Saxon. See Course 14, p. 43. Professor WAUCHOPE.

The instructors in English will hold themselves ready to assist competent graduate students in planning for other lines of special study. In special cases where there are no classes organized, resident graduates may, at the discretion of the Professor, pursue various independent lines of work under his direction.

HISTORY.

A. Courses open both to graduates and undergraduates.

1. The French Revolution and Napoleonic Era. Lectures. Fall and winter terms. Two hours a week. Professor WILCOX.

2. The Nineteenth Century History of Europe. Lectures. Spring term. Two hours a week. Professor WILCOX.

3. Constitutional History of the United States. Lectures. Three hours a week. Professor WILCOX.

4. Seminary in Early English History. Three terms. Two hours a week. Professor WILCOX.

5. Seminary in United States History. Three terms. Two hours a week. Professor WILCOX.

Special research work is also provided for those who intend to take the Master's degree in History as the major study. This work is conducted personally by the Professor of History and, in each case, is along the lines of the candidate's dissertation for the degree.

B. Courses open to graduates only.

6. Seminary in the French Revolution. Two hours a week. Professor WILCOX.

This consists, so far as possible, in a critical and comparative study of original sources. Controverted points receive special attention.

7. Seminary in the Period of Napoleon. Three terms. Two hours a week. Professor WILCOX.

8. Seminary in the Protestant Reformation. Three terms. Two hours a week. Professor WILCOX.

POLITICAL SCIENCE.

A. For graduates and undergraduates.

1. Economics, advanced course. A study in economic theory, historical and critical, as described under Courses 6 and 9, on page 48. Throughout the year. Professor LOOS and Dr. SHAMBAUGH.

2. Economic Policy. The courses in public finance, currency and banking, transportation, diplomacy and foreign relations, described in the undergraduate statement, on pp. 47–51, as Courses 7, 3, 4 and 15, with such additional work as may be prescribed. Open only to those who have a fair knowledge of economic theory. Throughout the year. Professor LOOS.

3. Principles of Government in the United States. The principles of government in the United States will be studied through primary sources: colonial charters, commonwealth constitutions, leading state papers prior to 1787, the Federalist and other contemporaneous essays on the Constitution, leading state papers and political documents from 1787 to 1870, the important speeches of Jackson, Webster, Calhoun and Lincoln, ordinances of secession, etc. Throughout the year. Dr. SHAMBAUGH.

4. Political Theory and Comparative Constitutional Law. The outlines of political theory will be presented in the fall term. A comparative study of the leading features of the constitutions of the United States, England, France and Germany will be undertaken in the winter and spring terms. Throughout the year. Dr. SHAMBAUGH.

5. Roman Law and Comparative Jurisprudence. Lectures with assigned readings. Throughout the year, hours to be appointed. Dr. HARRIS.

6. Sociology. Part 1. Lectures during the fall term on the primary factors and forces of social phenomonia; special attention is given to the earliest phases of political organization. Part 2. In the winter term, police, sanitation, pauperism, and crime receive special attention; this will be followed in the spring term by a study of municipal government, with special attention to social problems. Throughout the year, Mon., Wed., Fri., at 10. Professor LOOS.

B. Courses open to graduates only.

7. Political Philosophy. A study in political theory, classical and modern, with some notice of state forms. Lectures with critical reading of Aristotle's Politics during the fall term; and Green on Political Obligations and Sidgwick's Elements of Politics during the winter and spring terms, Tu., Th., at 10. Professor LOOS.

8. Seminary in Political Science. It is the aim of the Seminary to encourage special investigations. Questions in politics, economics, statistics, finance, administration or law may be taken for special research. From time to time papers are read, and then familiarly criticised and discussed. Throughout the year, hours to be appointed. Professor LOOS and Dr. SHAMBAUGH.

PHILOSOPHY.

A. Courses open to graduates and to undergraduates.

1. Philosophy of Nature. The principal subjects discussed will be final causes, the philosophy of evolution, and materialism. Lectures, theses, and private reading. Professor PATRICK.

2. Abnormal Psychology. The principal subjects discussed will be sleep, dreams, somnambulism, hypnotism, automatism, alterations of personality, telepathy, and psychical research. Lectures, theses, and private reading. Assistant Professor GILBERT.

In addition to these courses, undergraduate Courses in philosophy 4 and 6 may be taken by graduate students.

B. Courses open to graduates only.

3. Special Researches in Psychology. Original investigations of special problems in normal and abnormal psychology and child study. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *Studies in Psychology*. Assistant Professor GILBERT.

4. Seminary in Philosophy. Papers and discussions upon special problems in philosophy. The subjects studied the past year were pessimism, the philosophy of India, and mysticism. Professor PATRICK.

5. Seminary in Psychology. Reports and discussions upon advanced problems in psychology, such as the nature of the mind, theory of knowledge, the relation of mind and body, and kindred subjects. Assistant Professor GILBERT.

PEDAGOGY.

A. Courses open to both graduates and undergraduates.

1. Philosophy of Education and Practice of Teaching. Lectures and recitations. It is the purpose in this course to set forth the aims of education, as these aims have been developed in educational history; also to treat somewhat fully the doctrines of the educational leaders of recent times, and finally to illustrate the application of these doctrines in teaching. Fall term: Educational Aims and Doctrines. Comenius, Pestalozzi, Froebel, Herbart. This part of the course will include a special treatment of the Herbartian pedagogy and a discussion of educational values. Winter term: Teaching and Governing. This part of the course will embrace a treatment of the formal steps of instruction, an exposition of methods of teaching and lectures on sanitation. Spring term: Secondary Education. In this part of the course, attention will be given to the organization of courses of study and methods of instruction in high schools. Professor McCONNELL.

2. School Systems. This course will require of the students an examination of the state and city systems of the United States. Lectures and reports. Professor McCONNELL.

3. Child Study. In this course the history, literature and methods of work in child study will be treated. Professor McCONNELL.

Graduate students in these courses, in addition to the work expected of undergraduate students will be required to make a special study of one or more of the subjects included in the course selected.

B. Courses open to graduate students only.

4. Public School Conditions. This course will consist of concrete studies of public school conditions, and will be statistical and descriptive. It will be taken as individual work and will be under the direction of Professor McCONNELL.

5. Elementary Education in Germany. In this course the student will be required to make a special study of the application of the Herbartian principles in the elementary schools of Germany. The student must be able to read German. Professor McCONNELL.

MATHEMATICS.

The courses outlined below are offered to graduate students.

1. Integral Calculus. Hyperbolic functions, definite integrals, including the *beta* and *gamma* functions and elliptic integrals; the elements of differential equations. Lectures throughout the year; supplemented by a weekly seminary. Professor WELD.

2. Higher Calculus. Harmonic functions; theory of functions; differential equations. Lectures throughout the year; supplemented by a weekly seminary. Professor WELD.

3. Determinants and Modern Geometry. This course is supplemented by a fortnightly seminary. Professor WELD.

4. Analytical Mechanics. Statics; dynamics; the mechanics of fluids. This course is supplemented by a weekly seminary. Assistant Professor SMITH.

5. Advanced Mechanics. Virtual velocities, the principle of least action; dynamics of a particle with reference to the theory of orbital motion; hydromechanics. Lectures throughout the year; supplemented by a weekly seminary. Assistant Professor SMITH.

Further details regarding the above courses will be found on pages 67–69.

It is to be noted that in each of these courses a knowledge of the elements of the differential and integral calculus is implied. Graduate students in other lines of work may, however, take as a minor either of the two elementary courses in calculus offered to undergraduates. See Courses 3 and 4.

The courses in mathematics cannot, in general, be taken *in absentia*.

The following schedule is recommended to those wishing two years graduate work:

First year: Review elementary calculus; integral calculus; analytical mechanics; minor, subject to the approval of the Faculty. See pp. 67–69.

Second year: Higher calculus; determinants and modern geometry; advanced mechanics; minor, subject to the approval of the Faculty. See pp. 68, 69.

Each candidate for a degree will be required to submit a thesis representing original investigation in either pure or applied mathematics.

CHEMISTRY.

A. Courses open to both graduates and undergraduates.

1. Theoretical and Physical Chemistry. This course consists of lectures and laboratory work, and comprises an experimental study of cryoscopic, ebulioscopic and vapour density methods for the determination of molecular weights, of the speed of chemical reaction, of coefficient chemical affinity, and of other problems of like character. Only in even numbered years. Professor ANDREWS.

2. Advanced Quantitative Analysis. Professor ANDREWS.

3. Lecture and Laboratory course in Crystallography and Crystal Measurements. Mr. WALKER.

B. Courses open to graduates only.

4. Research work in Organic Chemistry. Professor ANDREWS.

5. Research work in Physical and Inorganic Chemistry. Professor ANDREWS and Mr. ENDE.

PHYSICS.

A. Courses open both to graduates and undergraduates.

1. Special Investigation or Research, to follow 4 and 5, page 56. Professor VEBLEN and Mr. BOWMAN.

2. Theory of Direct Current Dynamos and Motors. Professor VEBLEN.

3. Theory of Electricity. Direct currents twice a week. Professor VEBLEN. Alternate currents three times a week. Mr. BOWMAN.

4. Alternate Current Machinery. Polyphase current machines twice a week. Professor VEBLEN. The transformer, three times a week. Mr. BOWMAN.

5. Heat and Thermodynamics. Mr. BOWMAN.

6. Seminary. Systematic and critical reading of physical journals. Meetings every week through the year. Professor VEBLEN.

B. Courses open to graduates only.

The physical laboratory affords opportunity for such special work and research as may be desired for additional minor and major courses. Work may be laid out for those who wish, in any special line, and will include both experimental and theoretical treatment of the

branches chosen. For those who prefer it a general major course in physics will be arranged by a suitable selection from the different courses offered.

GEOLOGY.

A. Courses open both to graduates and undergraduates.

1. Invertebrate Paleontology, or Course 3, described on page 64, is offered to graduate and undergraduate students who have previously taken Course 2. This course can only be taken as a minor by candidates for the Master's degree. Professor CALVIN.

2. Economic Geology of the United States may be taken on the same terms as 1.

B. Courses open to gradnates only.

3. Graduate students who elect geology as a major will be assigned work involving original research in some branch of geology or paleontology. This work may embrace such subjects as describing and mapping the geological formation of some selected area, Pleistocene geology of some country or group of countries, the stratigraphic distribution of the fauna of a given geological formation, the critical study of certain selected geological faunas, the geological and geographical range of certain zoological groups of organisms, or the evidence of evolution in successive geological fauna. Throughout the year, daily. Professor CALVIN.

BOTANY.

A. Courses open to both undergraduates and graduates.

Courses 4, 5, 6, 8 and 9, as described on pp. 65, 66, are open to graduates who may select botany as a minor. The completion of Courses 1, 2 and 3, as described on pp. 64, 65, or the equivalent is presupposed in all cases.

B. Courses open to graduates only.

1. Histology. The preparation and critical study of material illustrative of the structure of some special group of either sporophytes or spermaphytes; or the critical study of some special organ or tissue as developed in different plant groups. Professor MACBRIDE and Assistant Professor SHIMEK.

2. Physiology. Practical experimentation in laboratory and field, with the object of solving, so far as may be practicable, some physiological problem as presented in the case of a selected plant or group of plants; or the critical study of the function of some special organ, or group of tissues. Other topics may be found in research relative to the effect of environment, cross and self-fertilization, etc., in the matter of the distribution and differentiation of species, law of heredity, and kindred problems. Professor MACBRIDE and Assistant Professor SHIMEK.

3. Systematic Botany. Comparative study of the species of plants found in special geographic areas in connection with an investigation of the laws governing geographic distribution; studies of special natural orders of plants, cryptogamic or phenogamic, with reference to their taxonomy, relationships, distribution, etc.; comparative studies of plants of economic importance, their relationships and history; studies in problems of local forestry, especially as related to conditions found in the Mississippi Valley. Professor MACBRIDE and Assistant Professor SHIMEK.

ANIMAL MORPHOLOGY AND PHYSIOLOGY.

A. Courses open both to graduates and undergradutes.

1. Microtomy. Laboratory work. Methods employed in the preparation of animal tissues for microscopical study, methods of drawing, and methods of reconstruction from sections. Assistant Professor HOUSER and Mr. BURGE.

2. Comparative Neurology. Laboratory study of the central nervous system and the terminal sense organs by means of the technique of Golgi, Weigert, Nissl, and Ehrlich. Lectures twice a week. Assistant Professor HOUSER and Mr. BURGE.

3. Vertebrate Embryology. Laboratory work, accompanied by a series of lectures. The lectures discuss the general problems of vertebrate embryology, and are supplemented by collateral reading. The laboratory work embraces the study of the chick at different stages of development. Assistant Professor HOUSER and Mr. BURGE.

B. Open to graduates only.

4. Research Course. Facilities for original investigation will be

provided for those who select work in this subject as a major. The specific character of such work will he determined by individual considerations, but, in general, a problem will be assigned for independent investigation through tne use of refined laboratory methods. Candidates for this work are supposed to have a biological training at least equivalent to that provided by undergraduate Courses 1, 2, and 5. Assistant Professor HOUSER.

ZOOLOGY.

A. Courses open both to graduates and undergraduates.

1. Lectures in Speculative Zoology. Two hours a week. This course is devoted to a presentation of the more prominent theories concerning the origin and evolution of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts, and intelligence of animals. The course will continue through the year. Professor NUTTING.

2. Thesis. Equivalent to two terms' work. Advanced work in any group of animals of which the museum contains a sufficient series. Free access to any specimens or books on the museum floor is accorded to students doing thesis work in zoology. Professor NUTTING.

B. Courses open to graduates only.

3. An exhaustive systematic discussion of any limited group of animals of which the museum affords sufficient material and the library sufficient literature.

In several groups such as birds, echinoderms, mollusca, crustacea, coleoptera and cœlenterata, the museum can now offer facilities for the most advanced systematic work, both the material and literature being adequate.

4. Special investigation along the line of Speculative Zoology, e. g., coloration of animals, geographical distribution, variation, natural selection, etc.

ADVANCED DEGREES.

The degrees of Master of Arts, or Master of Science, will be conferred upon resident graduates on the following conditions:

1. The candidate must be a graduate of this University, or of an accredited University or College.

2. He must have pursued, during one or more years, a course of graduate study at this University, covering one major and one minor subject. In a two years' course, one major, and two minors, may be allowed. His studies during this time are to be under the immediate supervision and control of the professors immediately concerned, and be subject to the approval of the Faculty.

3. In all cases, the minor, (or minors), must be closely allied to the major subject.

4. He must submit a thesis of at least 5,000 words, showing marked attainment in some branch of learning. The subject of this thesis must be announced to the Faculty for approval, not later than the second Friday in December, and the thesis itself must be presented to the Examining Committee at a date to be set by the professor in charge of the thesis work, not later, in any case, than May 20th, of the year in which the degree is to be granted.

5. He must at the close of his course, pass a satisfactory examination, both oral and written, conducted by a committee which shall consist of three professors, selected by the Faculty for this purpose.

6. The degree of Master of Arts may be granted only after the completion of a course mainly literary in character; Master of Science, after one mainly scientific.

Non-resident graduates may receive the Master of Arts or Master of Science degree on complying with the following conditions in addition to or modifying those enumerated for residents:

1. The candidate will be required to outline a course of study, comprising a major and one allied minor subject, which must be approved by a committee of two or more professors named by the Faculty to pass upon it.

2. He shall at the close of each academic year present to the Faculty a report, which should constitute a complete synopsis of the

year's work, naming topics studied and authors read. These annual reports are expected to be specific and comprehensive.

3. His graduate studies must extend over three years; although in exceptional cases, where the candidate devotes a large part of his time to study, a shorter course, but in no case less than two years, may be accepted.

The degree of Civil Engineer is not conferred upon completion of an undergraduate course in Engineering, but instead thereof, the degree of Bachelor of Science in Civil Engineering. The degree C. E. will be conferred on graduates who have practiced the profession at least three years, and who have submitted an approved thesis, and passed a satisfactory examination.

THE UNIVERSITY.

LABORATORIES.

Chemical Laboratory.

The chemical laboratory occupies two stories in the new laboratory building. This space is divided into twenty-five rooms, designed in such a way to afford facilities for the prosecution of a wide range of chemical work.

The general laboratory is a room 100 feet long by 27 feet in minimum breadth, lighted from one side only by ten large windows. In this and all other rooms of the new building provision has been made for perfect ventilation by the construction of numerous air flues. The building is heated by steam, which will also be freely used for chemical purposes, as for drying-ovens, distillation, etc.

The lecture hall is built in amphitheater form with raised seats. It will accommodate nearly two hundred students, every one of whom can clearly see the lecture table and any experiment that may be performed there, even from the most distant parts of the room.

The size of the building on the ground is 150 x 105 feet. In all the rooms, cross lights have been avoided, and in every respect, the designer and the architect, respectively the Professor of Chemistry and the Professor of Civil Engineering at the University, have spared no pains to meet every reasonable demand in the construction of a thoroughly modern and substantial structure, adapted as perfectly as means would permit to its special uses.

A storage battery and dynamo in connection with a gas engine furnish the electricity to the various laboratories for electrolysis and other uses. Especial facilities in the way of apparatus are provided for the study of physical chemistry.

Physical Laboratory.

The physical laboratory occupies the first floor and the basement of the North building, with an available floor space of more than 8,000 square feet.

In the basement is the large engine and dynamo, containing a gas engine which drives a shaft twenty feet long. To this shaft are belted the dynamos, of which there are five of from one to ten horse-power capacity, and representing several types. Here also is a cable switch-board, meters, lamps, and other apparatus. In this room, and driven by the same engine, are a large lathe, benches, and the usual tools for working metal. In the battery room are some 45 accumulators of different varieties. A large and commodious photometer room is supplied with a complete Kruess photometer. One basement room has been equipped as an electrical laboratory. Another room is supplied with a carpenter's bench and a few wood-working tools.

On the floor above are eight rooms. The lecture room, with seats for some 70 students, is supplied with water and gas and with wires from the dynamos and the accumulators. The windows can be easily darkened, and there are conveniences for making projections by sunlight or by electric or other artifical light. A large and well lighted room is devoted to the uses of a general laboratory, especially in the line of mechanics, and contains a number of balances, air-pumps, a cathetometer, and a number of other measuring instruments. Another large room contains much of the apparatus for electrical testing. Here also is the special physical library with the journals taken by the laboratory. Three smaller rooms are given respectively to heat, light, and magnetism, and are well equipped with apparatus. There are also two offices, for the professor in charge and the assistant professor.

The laboratory is fairly well supplied with lecture apparatus; and among the instruments of precision are many of the best and finest to be had. The equipment is especially full in mechanics, optics, and electricity. Most of the apparatus has been purchased in recent years, and has been selected with great care; and some has been constructed for particular uses in this laboratory.

Laboratories for Animal Morphology and Physiology.

The laboratories occupy the west half of the first floor of the Natural Science building, together with a portion of the basement, The main laboratory for the work of the first year is a large, well lighted room, and is supplied with heavy oak, slate-topped tables, furnished with drawers and cases for receiving the microscopes and other instruments employed in the work. The tables will accommodate twenty-four students at one time. The laboratory is furnished with twenty-four first-class students' microscopes, and the necessary accessory apparatus used in biological investigation. There is also a large series of microscopical and anatomical preparations here. The laboratory for advanced work is equipped with special microscopes, sliding microtomes of approved pattern, a Minot automatic microtome, imbedding apparatus, a thermostat, a large incubator, turn tables, a complete stock of glassware and reagents, and various pieces of physiological apparatus. Opening from the main laboratory are private laboratories for students pursuing special lines of investigation. The basement laboratory is utilized for the storing of living material, and for special experimental work.

Geology and Paleontology.

The material for illustrating the work in geology and paleontology embraces:

1. The museum collections of rocks, clays, building stones, minerals, and fossils.

2. A large series of maps, charts, lantern slides, photographs, and geological models.

3. A lithological lathe for making rock sections, or sections to illustrate the structure of ancient forms of animals and plants.

4. Petrographical microscopes.

5. Photographic apparatus, including a large photomicrographic camera.

6. A large series of negatives from which the students make prints to illustrate their permanent note books.

7. Geological phenomena illustrated within easy reach of Iowa City.

The surrounding neighborhood affords many instructive examples of phenomena of interest to the student of geology, At the same time it offers unexcelled opportunies for field work in mapping, making geological sections, tracing strata from one exposure to another and making paleontological collections. The Pleistocene deposits are of especial interest. The available material is not only sufficient to illustrate the ordinary undergraduate courses in geology, but advanced students will find enough to occupy their time with profit for two or more years.

Botanical Laboratory.

This laboratory is located on the second floor of the Natural Science building, and is in direct communication with the Herbarium. It is supplied with heavy oak, slate-topped tables, furnished with drawers and cases for the instruments used in microscopic work, and is arranged to accommodate twenty-five students at one time.

Twenty-five compound microscopes, wish necessary accessories, section-cutters, etc., are at the disposal of the students.

Connected with main laboratory are private laboratories for students pursuing special lines of investigation. Two of these are furnished with special microscopes and apparatus for investigation in Vegetable Physiology.

These laboratories are well lighted, and in every way adapted to satisfactory work.

Psychological Laboratory.

The psychological laboratory occupies the lower floor of the brick building, No. 14 North Clinton street, facing the campus. It includes a commodious lecture room, library and reading room, in addition to three quiet, well-lighted rooms for laboratory work, and a dark room.

The thorough equipment of the laboratory with apparatus and needed accessories offers every opportunity for the study of the different senses, memory, illusions, time relations of mental phenomena, and the nervous system.

A partial list of apparatus is as follows: A complete set of instruments for studying the time relations of mental phenomena by the graphic method, recording time to the thousandth part of a second;

this set, excluding the smaller necessary accessories, comprises the following more important pieces: a recording drum, two induction coils, batteries, multiple key, reaction key, five finger reaction key, graphic chronometer, rheocord, 100 v. d. electro-magnetic tuning fork, time markers, automatic contact, galvanometer, touch key, switches, commutator, telephone-receivers, Geissler stimulator for sight reaction, pendulum circuit interrupter, instantaneous exposure apparatus, slide inductorium, foil apparatus and speed counter. For the study of taste and smell: several varieties of olfactometers and gustatory apparatus. For touch, muscle sense, temperature and kindred phenomena: three sets of muscle sense weights, loaded boxes for the study of the psycho-physic law and weight illusions, steadiness guage, æsthesiometers, hot and cold spot apparatus, balance scale, four dynamometers, algometer, Marey tambours, thought-action apparatus, foil, muscle-memory apparatus, voluntary motor recorder, spirometer, and set of touch weights. For hearing: sound pendulum (by Krille), series of 22 Koenig cylinders for highest audible tone, Galton whistle with manometer and blower, Appunn's reed, set of tuning forks with resonance boxes for illustrating harmony, beats and sympathetic vibration; set of forks for discrimination of pitch, metronome, two audiometers, sonometer. For sight: rotation apparatus with Maxwell color disks for illustrating mixing of colors, color contrast, etc., contrast apparatus, two tachistoscopes, apparatus for testing color blindness, Rothe's color-wheel disks, two photometers, binocular and monocular apparatus, eye-muscle apparatus, dark box, apparatus for outlining the blind spot, zoetrope and perimeter. The addition, also, of the latest model of the Zimmerman kymograph and Zeitsinn apparatus during the past year gives increased facilities in dealing with all problems requiring the graphic method and investigation of the time sense.

In addition to the apparatus enumerated above might be mentioned other numerous pieces for demonstration purposes. The study of the nervous system is illustrated by about one hundred charts in addition to various models, including Auzoux's dissectible model of the brain, ear models, eye models, ophthalmotrope, etc.

The workshop, fitted out with lathe, work bench and necessary tools, forms an indispensable adjunct to the laboratory.

MUSEUMS.

Museum of Natural History.

The museum of natural history is rapidly growing, and becomes daily more valuable through donations of material by friends of the University.

By the generosity of the collector, the famous Hornaday collection of mammals and birds has become the property of the University. This collection contains many rare forms of mammals and birds, and is particularly rich in typical exotic forms from India and Australia.

Mr. D. H. Talbot, of Sioux City, has recently donated to the University his extensive collection of natural history specimens and minerals. This collection contains many thousand specimens, being especially rich in mammals, birds, and anatomical preparations.

During the last six years, expeditions for zoological explorations in the interest of the University have visited the following regions: Bahama Islands, Bay of Fundy, Rocky Mountain region, Pacific coast, Alaska, mountains of Tennessee, the Winnepeg country, Lake Athabasca, Gt. Slave Lake, the Arctic coast, Siberia, Cuba, Florida Keys, British West Indies, and the Bay of Naples.

An entire rearrangement of the museum has been undertaken, and a new system of labeling, cataloguing, and exhibiting has been adopted, with the intention of making the material embraced of the utmost practical use to students of natural history.

A rapidly growing library of reference for the use of students of zoology is placed on the museum floor, and a free use of all the material in the various collections is encouraged, for which purpose a cheerful and convenient study room has been provided for the use of students and specialists.

The material embraces:

1. Geological Collections.

1. A large series of minerals, building stones, fossils, earths, etc., collected chiefly in the prosecution of the State geological surveys between the years 1856 and 1870. These collections are annually increasing by contributions from various sources.

2. The Calvin collection of American and European fossils.

3. A superb collection of cretaceous cycads from the Dakota sandstone of the Black Hills.

4. Recent extensive collections illustrating the cretaceous faunas and economic geology of the Black Hills.

A rapidly growing collection illustrating general economic geology.

2. Zoological Collections.

1. Mammals. A large series of mounted specimens is now on exhibition, the great majority being rare and valuable foreign species, including a series of marsupials, which surpasses anything of the kind west of the Alleghanies.

Besides the Hornaday collection, the museum contains a large number of native mammals, about forty specimens being from the Pacific coast. A complete series of the larger mammals of North America is rapidly being secured through the kindness of Mr. D. H. Talbot, and the efforts of Mr. Frank Russell, who returned from the far North with an exceptionally fine series of the large mammals of that region.

2. Birds. The ornithological material in the museum now embraces about 11,000 specimens, about 1,000 of which are exhibited in the mounted series, the remainder being included in the study series for the use of students and specialists.

Besides the large collection of native birds, containing nearly all the species found in Iowa, the following collections are noteworthy:

The Hornaday collection of birds, containing one hundred and twenty-five specimens, nearly all of which are exotics, and many, such as the ostrich and emu, of great value.

The Bond collection of birds of Wyoming, donated together with a large collection of Iowa birds, by Mr. Frank Bond, of Cheyenne, Wyoming.

The Harrison collection of British game birds and birds of prey, a large and valuable series, donated by John Harrison, Esq., of England.

The Talbot collection of American birds, embracing about 10,000 specimens.

A collection of 500 birds from the N. W. Provinces of British America, made by the Curator, Mr. Frank Russell and Mr. A. G. Smith.

A collection of about 600 specimens of birds from the Winnipeg country, Great Slave Lake, Athabasca Lake, the Mackenzie River and the Arctic coast, made by Mr. Frank Russell.

The Curator has donated his study series of over eight hundred bird skins from North and Central America, and the Bahama Islands. This series is of special value to students interested in ornithology.

3. Reptiles. The alcoholic collection of reptiles has received many important additions, among which may be mentioned a number of specimens from India, donated by Rev. A. Loughridge, and many native specimens presented by students. Regent B. F. Osborn has donated his large collection of alcoholic specimens, especially reptiles, thus nearly doubling the series of these forms.

4. Fishes. Professór B. Shimek has presented the museum with his entire collection of fresh-water fishes, of which we now have several hundred specimens, besides a number of marine forms.

During the past winter a collection of 135 species of the fresh-water fishes of Central and Western North America, was donated to the University by the United States Fish Commission.

5. Insects. Assistant Professor WICKHAM is now engaged in assorting a large series of the coleoptera of North America, which he has generously donated. All of the foreign coleoptera in this magnificent collection are now the property of the museum.

6. Marine Invertebrates. A collection consisting of several thousand specimens of crustaceans, mollusks, star fishes, corals, sponges, etc., has been supplemented by a valuable series consisting of several hundred alcoholic specimens, many of which are the gift of the United States Fish Commission.

The alcoholic collection has been enlarged by material collected during two expeditions to the Bahamas, Cuba and the Florida Keys, and thousands of specimens have been added by collections made in the Bay of Fundy by Professors CALVIN and NUTTING,

A car load of marine specimens was secured by the Bahama expedition, 1893. This collection contains a large number of deep-water forms, placing this University far ahead of all other western institutions in the matter of marine material for exhibition and study.

A valuable series of marine forms of the more fragile and delicate kinds, such as medusæ, sea-anemones, etc., has been secured from the

Stazione Zoologica at Naples, where the most superb preparations of these wonderfully beautiful forms are made.

7. Terrestrial and Fresh-Water Mollusca. The Shimek collection of land and fresh-water shells, embracing nearly all the species known to occur in Iowa, together with many exotic species.

8. Osteological Preparations. A series of mounted skulls and skeletons, illustrating the osteology of typical series of vertebrates, is exhibited, and is of the greatest value to students of comparative anatomy and zoology.

9. Ethnological Material, illustrating the handiwork of the Mound Builders, Pueblo Indians, Zunis, Moquis, Acomas, Mojaves, Crees, Dog Ribs, Metis, Kosmolliks, Piegans, Tchukchees, and Navajos, together with skulls and other remains of the ancient and modern inhabitants of America.

Mr. D. H. Talbot, of Sioux City, has recently added very largely to this department of the museum. Mr. Russell has been active in securing ethnological specimens illustrating the life and manufactures of the Crees and other northern tribes of Indians, and of the Esquimaux.

During the last year the Museum has received specimens or material aid from the following persons: Mr. Edward Abbott, Prof. Alexander Agassiz, Mr. N. B. Barber, Mr. John Barnes, Mr. Ventura Barrera, Mr. Paul Bartsch, Mr. Arthur J. Cox, Dr. W. H. Dall, Mr. M. W. Davis, Mr. Charles Davis, Mr. Vinal Edwards, Prof. Samuel Garman, Mrs. Virginia Barrett Gibbs, Mr. G. M. Gray, Mr. William Hoenick, Dr. A. O. Hunt, Major Lovelace, Capt. E. C. Murray, Mr. J. H. Ridgway, Dr. E. W. Rockwood, Prof. B. Shimek, Hon. A. W. Swalm, Mr. D. H. Talbot, and Prof. A. E. Verrill.

South American Expedition.

Mr. Charles L. Smith was in Nicaragua from August, 1894, to May, 1896, as botanist for the University. He made handsome collections, reports of which will appear in succeeding numbers of the *Bulletin of the Laboratories of Natural History*.

Scientific Publications.

The laboratories of natural history inaugurated in 1888 the publication of bulletins for the porpose of preserving a record of the work prosecuted along the lines of botany, geology, and zoology. Three volumes have thus far appeared in twelve numbers, and one number of the fourth volume is nearly ready. The numbers are sent *gratis* to all correspondents from whom the University receives an equivalent, either in publications or material. To others the price is 50 cents a number. Address the Secretary of the University.

The Herbarium.

The herbarium is crowded into a single room on the second floor of the Natural Science building. It contains:

1. A very large and constantly increasing collection of fungi, chiefly saprophytic, from all parts of North and Central America. To be classed here is also a large collection of the myxomycetes from all parts of the world.

2. A large collection of ferns and mosses from both hemispheres.

3. A collection of lichens, representing most of the species east of the Rocky Mountains.

4. A collection of many thousand flowering plants, representing very fully the local flora, and specially rich in Central American and European forms. The number of plants in the herbarium exceeds 40,000.

5. A collection of seeds and fruits (dry) including cones, representing the flora of North America chiefly, but containing also much material from the Tropics.

6. A collection of the principal woods of the United States.

The herbarium collections, thanks to friends and collectors in various parts of the world, are rapidly increasing in extent and value. It is hoped that private collectors will hereafter as heretofore find the University a proper place for the deposit and care of collections of plants.

Special thanks in this connection are due to E. D. W. Holway, A. P. Morgan, C. L. Smith, George Payne, Euclid Sanders, James E. Gow, T. J. Fitzpatrick, F. Reppert, J. H. Mills, D. H. Talbot, L. F.

Pammel, C. L. Shear, J. B. Ellis, H. F. Wickham, Frank Russell, Paul Bartsch, B. Fink, R. I. Cratty, J. E. Cameron, C. W. Weidner, C. C. Stover, W. C. Sturgis, Fannie Langdop, L. M. Cavanaugh, Jno. Floerschinger, H. Wieneke, E. A. Spraker, A. O. Hunt, G. B. Rigg, T. E. Savage, P. C. Myers, C. W. Irish, Herbert Goddard, and C. W. Sears.

Astronomical Observatory.

The students' astronomical observatory is conveniently located on the University campus. It is furnished with a five-inch equatorial telescope by Grubb, of Dublin, having circles, driving clock, position micrometer, helioscope, and solar and stellar spectroscopes, a transit instrument by William Wuerdeman, of Washington, a prismatic sextant and artificial horizon by Pister and Martins, of Berlin, clock chronometer, chronograph, etc.

The mathematical and astronomical library comprises over one thousand volumes, including many rare and valuable works. The periodical literature devoted to these branches of science is also well represented.

Engineering Laboratories and Draughting Rooms.

The hydraulic laboratory is a room having a floor space of 575 square feet. The equipment for 1897-8 will include the necessary tanks with standard orifices, tubes and weirs for free and submerged flow, hook gauge, water meters of various kinds, pressure gauges and other necessary appliances for illustrating hydraulic principles; also a Price's pneumatic current meter for field gaugings.

The cement laboratory contains a Riehle 1,000 pound cement tester, both an "S. U. I." and a "Sims" briquette making machine, and all necessary tanks, mixing sinks, molds, etc., for making complete tests of cements.

The iron, steel, and wood laboratory contains an autographic testing machine and a 100,000 pound Riehle machine.

The machine shop contains a metal lathe, planer, and drill-press; a 35 horse-power automatic cut-off Lansing engine, injector, speed indicator, all necessary bench tools, etc.

The draughting rooms are well lighted and equipped with everything necessary.

The department is provided with a field equipment ample to permit full and complete practice in the different kinds of surveying; this equipment consists of a vernier compass, a railroad compass, a solar compass, levels, and transits with stadia, gradienter and Saegmullar solar attachment, also a plane table of the latest approved form with best telescopic alidade and all necessary attachments, together with all the rods, flags, chains, tapes, etc., that are necessary to fully equip the various classes and divisions in surveying without interferring with each other in their work.

The engineering library consists of 510 volumes of the standard works on the various engineering subjects; these books are selected from and are a part of the general library of over 37,000 volumes, but are arranged in a convenient room adjacent to the drawing rooms, and are freely used by the engineering student. All the best engineering journals and periodicals are received, bound, and kept on file.

In the Tallant memorial library are numerous books on engineering subjects which the students are allowed to use subject to the rules of the general library.

Each engineering student is eligible for membership in the Engineering Society. This society meets each week, and papers upon engineering subjects are prepared and read by the students.

An engineering journal, *The Transit*, is published semi-annually by the University. It is edited by the engineering students, and contains the results of original research in engineering problems, by undergraduate students and alumni.

GENERAL INFORMATION.

The Library of the University.

The libraries of the University contain in the aggregate 42,000 volumes. The general library is open to students of all departments during eight hours of every week day. Books may also be drawn for outside use.

The gift of Mr. D. H. Talbot, of Sioux City, Iowa, is a large and valuable collection, of about 4500 volumes,—a collection somewhat miscellaneous, but chiefly pertaining to natural history, and to explorations, voyages, and travels. It comprises some very scarce and valuable sets, as well as single volumes. There are a few very old volumes, dating from the beginning of the sixteenth century,—valuable not only on account of the subject matter, but also as specimens illustrating the history of book-making.

About seventy American and European periodicals are taken, and are kept on the tables of the reading room throughout the year. Many of the dailies and weeklies of the State are donated by their publishers and kept on file.

The general reading room is a large, well-lighted apartment, supplied with works of reference and the current periodical literature, open from 8 A. M. to 12 M., and from 1:30 to 5 P. M., and is free to all students.

Societies.

Several literary and scientific societies are maintained by the Faculty and the students of the University. They afford an important means of general culture and scientific research, and thus form a valuable element as well as an attractive feature in University life.

Among those purely literary are the TABARD, POLYGON and IVY LANE. The BACONIAN has for its object discussion of scientific questions, and the POLITICAL SCIENCE CLUB discusses questions in history, politics, economics, law, education, and ethics.

The IRVING INSTITUTE, the ZETAGATHIAN SOCIETY, the PHILOMATHIAN SOCIETY, for young men, and the HESPERIAN SOCIETY and ERODELPHIAN SOCIETY, for young women, hold weekly meetings for improvement in debate, oratory, writing, and declamation.

There are also in the institution societies connected with the Engineering, Chemical, Law, and Medical departments.

There is connected with the Irving and Zetagathian Societies a Lecture Bureau, which furnishes at a small cost during the year a series of literary, and musical entertainments of a high order. From time to time, also, entertainments, musical, literary and dramatic are given by the University Glee Club, the Band, and other student organizations.

Student Publications.

Two periodicals are published by the students: *The Quill*, a weekly literary magazine; and *The Vidette-Reporter*, a tri-weekly newspaper; both of which afford an excellent opportunity for journalistic work. The Junior class publishes a University annual in book form called, *The Hawkeye*.

University Extension.

The University recognizes in the University Extension movement an agency of great value in education. It invites correspondence from communities which may desire to organize lecture courses on literary and scientific subjects, and will to the extent of its ability meet the desires of these communities.

Lecture courses covering a wide range of subjects are offered by members of the University Faculties.

An arrangement has been made between the University and the University Association of Chicago by which, University professors, so far as their regular duties will allow, will lecture before the centers working under the care of the Association.

Printed matter explaining the work offered by the University, including syllabi of lecture courses, is published by the University, and can be secured by addressing the Director of University Extension.

Prizes.

This prize is open to students of all departments of the University.

MAYER PRIZE.—Mr. Max Mayer, of Iowa City, has established a prize of the annual value of $25 for excellence in athletics. The details as to the special matters of competition and the method of awarding the prize will be publicly announced at the beginning of the year 1897–8.

PICKARD PRIZE.—A prize in the form of a rare set of books of the value of twenty-five dollars, was offered last year by Dr. J. L. Pickard, for the encouragement of extempore speaking, to the student in Political Science who was awarded first rank in competitive extempore debate. A similar prize of the value of twenty dollars is again offered for this year. The competitive debate will take place early in June.

PECK PRIZES.—Mr. F. W. Peck, of Chicago, has established for the Northern Oratorical League prizes of $100 and $50 to be given to the first and second honor men in the annual contests.

Students and Civil Authorities.

The relation of students to all laws and to city ordinances is precisely the same as that of other residents of the city. The University grounds are as completely under the jurisdiction of the civil authorities as any other part of the city.

Means of Moral and Religious Culture.

Close Hall has been erected through the exertions of the Young Men's and Young Women's Christian Associations; mainly from funds contributed by the faculty, students, and alumni of the University and the citizens of Iowa City. It is a spacious and convenient building, containing a large assembly hall, gymnasium, reading rooms, reception room, and bath rooms. It is extensively used for the meetings of the large and vigorous Christian Associations, as well as for the social and literary gathering of the students.

The churches of the city take a deep interest in the students of the University and heartily welcome them to their public services and to a share in their religious activities and social life. The churches of the city are the Baptist, Christian, Congregational, German and English Lutheran, Methodist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, Unitarian, and Church of God.

Physical Training and Athletics.

The University authorities encourage physical training as acquired in a gymnasium, in military drill, and in the exercises and sports in the Athletic Park, but only in such amount and of such character as is compatible with, and promotive of the higher objects of the University. Intercollegiate contests are allowed, but under conditions as to membership and organization of teams, and leaves of absence determined by the athletic committee of the Faculty.

Athletic Park. This field contains about ten acres in the immediate vicinity of the University grounds on which have been con-

structed a track, for running and bicycling, tennis courts, baseball, and football fields, and a grand stand.

Gymnasium. In connection with Close Hall is an excellent gymnasium, equipped with suitable apparatus, lockers, baths, etc. This is under the direction of a competent instructor, who organizes classes for both young men and young women.

New Collegiate Building.

The 26th General Assembly passed an act levying a special tax for a period of five years of one-tenth mill on the total assessment of the State, the proceeds to be devoted exclusively to the erection of buildings for the University. This tax will yield $275,000, and it is the intention of the Board of Regents to begin as early as possible the construction of a large and well-equipped building for the use of the Collegiate Department.

Expenses.

There are no dormitories and no commons connected with the University.

Boarding and lodging in private houses can be obtained for from $3 to $5 a week.

Clubs are also formed, in which the cost of living is from $1.50 to $2.50 a week.

Room rent varies from 50 cents to $1.50 for each student a week.

The expense for tuition is as follows:

Collegiate Department, $25 per annum, payable, $10 at the beginning of the first term, $10 at the beginning of the second term, and the balance at the beginning of third term. For one or two terms the fee will be $10 each.

It has been determined, however, by the Board of Regents, that no student need be excluded from the University by reason of his inability to pay tuition. Application for reduction of tuition, or for exemption therefrom, may be made to the President, and will be considered by the Executive Committee, or by the Board of Regents.

Each candidate for graduation will be required to pay a fee of $5.

A fee of $10 is required of all candidates for the Master's degree, or for the degree of Civil Engineer.

Ample facilities are afforded in the city for instruction in Book-keeping, Stenography and Type-writing, in studies preparatory to the University, and in Music, by the High School, the Iowa City Commercial College and Academy, the Iowa City Conservatory of Music, and by private instructors.

Law Department.

Faculty and Lecturers.

CHARLES ASHMEAD SCHAEFFER, A. M., PH. D., LL. D.,
President and Lecturer on Medical Jurisprudence.

EMLIN MCCLAIN, A. M., LL. D.,
Chancellor, and Resident Professor of Law.

SAMUEL HAYES, M. S., LL. B.,
Resident Professor of Law.

JAMES A. ROHBACH, A. M., LL. B.,
Secretary, and Resident Professor of Law.

JOHN J. NEY, LL. B.,
Resident Professor of Law.

EDWARD P. SEEDS, LL. B.,
Resident Professor of Law.

L. G. KINNE, LL. D.,
Lecturer on Law.

GIFFORD S. ROBINSON, LL. B.,
Lecturer on Law.

MARTIN J. WADE, LL. B.,
Lecturer on Law.

HORACE E. DEEMER, LL. B.,
Lecturer on Law.

LEONARD C. RINARD, LL. B.,
Librarian.

LAW DEPARTMENT.

Preparatory Study; Length of Course.

The profession of law is properly regarded as a learned profession, requiring a considerable degree of general education as a preparation for its proper study and practice. Those who can take a college course, either in whole or in part, before entering upon the prescribed period of law study should do so, and it is recommended that in preparatory study, special attention be given to American and English History, Political Science and International Law. But whether one who desires to enter upon the study of law shall have collegiate preparation may perhaps be left to his own judgment, with the suggestion that such preparation is important to ultimate professional success, but in order that the student may successfully prosecute his studies in the law school he should have at least a high school education or its equivalent, and this will be insisted upon as a condition for admission to this Department.

The Statutes of Iowa regulating admission to the bar require two years' study of law, and the same term of study is required for graduation from the Law Department. The course of study is arranged on this basis, extending through two school years of thirty-six weeks each, exclusive of vacations, and the students are classified accordingly as Juniors and Seniors. The State Bar Association has twice recommended to the Legislature the extension of the required term of study for admission to the Bar to three years and whenever such extension is made the Law Department will without doubt, extend its course of study to three years, and in this respect as in others strive to keep abreast of the best law schools of the country, but so long as a two years' term of study is sufficient to secure admission to the bar it is not deemed expedient to require a longer term for graduation from the Department.

Methods of Instruction.

The aim of any course of instruction in law may properly be considered as twofold: First, to impart a knowledge of the recognized principles of the law, and, secondly, to discipline the mind in methods of legal study. Various methods of instruction, each having its special merits, are pursued in different schools. They may be roughly arranged in three classes, namely, lectures, text-book instruction, and study of cases. The peculiar merit of the first is that it may be made the means of giving the most vivid and striking picture of legal principles; the second furnishes the most convenient means of individual study; and the third, the best discipline in legal thinking.

In this school the effort is made so to present the subjects as to combine in the highest practical degree the excellences of these various methods.

In connection with several of the lecture courses, the students are furnished with printed synopses, which give in a concise form, and more accurately than a student would usually write them in his note-book, the principal doctrines of the subject, arranged according to some analytical method. On some of the most extensive and important subjects, the students are required to provide themselves with, and use text-books in which lessons are to be regularly prepared and recited, the recitations either following, or being accompanied with, oral explanations more or less formal, calling attention to the important doctrines, and explaining those which may be obscure. The study of leading cases is carried on extensively in connection with the courses of lectures, references for that purpose being given by the lecturer, or printed in the synopsis, and the students being frequently required to state briefly in the class the points decided in cases assigned for that purpose. In some subjects the students are required to provide themselves with volumes of selected cases, and the exercise in the class consists of a discussion of such cases by members of the class, and deduction therefrom of the rules of law on the topic to which the cases relate. This exercise in developing the rules of law from actual cases selected for the purpose, and studied by each student before their discussion in the class, familiarizes the student with the methods of investigation pursued by the lawyer and the judge,

and gives not only a knowledge of the law on the subject, but a discipline in research and in legal thinking not to be attained, it is believed, in any other way. As a preparation for this method of study, the course in the study of cases is especially valuable.

The fact that the greater part of the instruction is by resident professors, giving their entire time to the school, makes it possible to pursue each subject consecutively, one hour a day, until it is concluded. The attention of each student being thus directed to but few topics at once, he is able to obtain a clearer and more complete conception of each than would be possible if the instruction were irregular and disconnected.

As an aid and stimulus in study, and also for the purpose of furnishing satisfactory evidence of progress, written examinations are required from time to time on each topic studied in the course, and until a reasonable proficiency in each topic has thus been shown, the candidate for graduation will not be presented to the committee for final examination.

Schedule of Studies.

The course of study is so arranged that the Junior and Senior classes have separate and distinct courses of instruction throughout, and the subjects are divided between the two courses and arranged in each course so as to be presented in natural order.

In the Junior year are placed subjects which are elementary and at the same time fundamental. The work of this year is therefore of more importance to the student than that of the Senior year, and requires careful study, at the same time imparting thorough discipline and familiarity with the methods of legal reasoning. It is believed that the Junior studies are such as to make of the greatest value to the student the services of regular and experienced instructors and the advantages of a law school. Unless the principles of law as a system, the nature of its important divisions, and the fundamental doctrines of such subjects as Elementary Law, Contract, Torts, Criminal Law, Pleading, and Evidence, are thorougly mastered, the whole legal education will be defective and unsatisfactory.

The courses of study are so arranged that the students in each year

shall have instruction in studies peculiar to that year for at least two hours a day, that time being divided between two instructors on separate subjects, which are thus carried along together. Iu each class a third hour of class work will be required during a part of the year.

The following schedule of study has several features to some extent peculiar. At the beginning of the Junior year a course ot lectures, occupying one hour a day, is given on Elementary Law, in which course the attention of the student is called to the nature of law, its sources and development, the difference between the unwritten and the written law, the method of determining what the law is by the use of reports, statutes, treatises, digests, etc., and finally to the different branches into which the whole body of the law is usually divided, and their relations to each other. This course covers remedial as well as substantive law, and thus furnishes instruction in the general principles of pleading, serving in this respect as a basis for the study of Code Pleading.

To the various branches of pleading and practice, special attention is given. Although it has been generally considered that the logic of pleading is to be found in the common law system, while the code sytem is looked upon as unscientific, yet a comparative study of the two will show that the latter is broader in its principles and more liberal in its application than the former. The principal branches of practice are fully treated during the Junior year in order that the student may apply them in the moot courts; but an advanced course in pleading with special reference to the principle of common law pleading is given in the Senior year.

The school attempts to teach how to ascertain the authoritative value of cases. There is one course in which this is the only purpose. In this course the facts, pleadings, and result of each case are briefly stated by the student. Attention is then directed to the manner in which the case reached the court whose opinion is reported. The student is required to discover exactly what proposition of law was essential to the decision and to eliminate *dicta*. To this end he is finally required to prepare a brief but accurate note of the doctrine for which the case is authority. This work is intended to fit students for preparing briefs, text-books, and digests. Obviously this method is identical with that adopted by all careful lawyers in collecting author-

ities. The student who has mastered the system is prepared to make good use of other case courses in which the ultimate purpose is the mastery of the subject to which the cases pertain, and, indeed, is prepared to use intelligently all cases to which he may be referred in any part of the his study or future practice.

The general instruction in the Law Department does not give prominence to the statutes and decisions of any one state, but is intended to fit students to practice in any state or country where the Anglo-American system of law prevails. For the benefit of the student who has determined where he will practice, and who wishes to familiarize himself in advance with the statutes and decisions of his chosen state, the Law Department furnishes optional courses of study, supplementing the prescribed courses. An optional course will be given on the law of any state or territory, in which three or more students ask instruction. Each course will cover the constitution, statutes, and decisions, will call special attention to the points in which the law of the state in question differs from the law usually found throughout the United States, and will also require the student to become well acquainted with leading cases. A student intending to pursue a course in state law must provide himself with the revised statutes of the state in question, and a digest of its decisions.

The following schedule presents the course substantially as it was given during the year 1896–97, and the order in which the subjects may be expected during the year 1897–98.

JUNIOR YEAR.

FALL TERM.

Elementary Law. A course of lectures presenting the elementary principles of law in general, and of its important branches. This course covers also the principles of pleading. Eight and one-half weeks. Professor ROHBACH.

Contracts. Bishop on Contracts is the text-book used. Ten weeks. Professor NEY.

Code Pleading. A course of instruction, mainly by lecture, on

pleading under the codes, with practical exercises. Five weeks. Professor HAYES.

Study of Cases. Recitations in Wambaugh's Cases for Analysis. Three and one-half weeks. Chancellor MCCLAIN.

WINTER TERM.

Sales, Bailments and Pledges. A course of instruction by the use of Adam's Cases on Law of Sales and printed synopses, sales, bailments, and pledges. Nine weeks. Chancellor MCCLAIN.

Torts. Recitations in Cooley on Torts, with oral explanations, and citation and examination of leading cases. Eleven weeks. Professor HAYES.

Domestic Relations. A course of lectures on the subject of marriage and divorce, the property rights of married women, parent and child, guardian and ward, the rights and liabilities of infants, and kindred topics. Two weeks. Judge KINNE.

Guaranty and Suretyship. A course of lectures. One week. Judge DEEMER.

SPRING TERM.

Probate Law and Procedure. A course of lectures on the execution and probate of wills, and the law of executors and administrators, including the settlement and distribution of decedents' estates, with references to statutory provisions and examination of cases. Five weeks. Professor SEEDS.

Criminal Law. A course of lectures accompanied with recitations in McClain's Outlines of Criminal Law and Procedure, with references also to statutory provisions. Five weeks. Professor ROHBACH.

Evidence. Recitations in the first volume of Greenleaf on Evidence. Five weeks. Judge WADE.

Negotiable Instruments. Recitations in Norton on Bills and Notes. Five weeks. Professor ROHBACH.

Trial and Judgment. Lectures and procedure at law in Courts of Record from the beginning of the trial until the entering of judgment, with reference to statutory provisions. Five weeks. Professor NEY.

SENIOR YEAR.

FALL TERM.

Real Property. Recitations in Tiedeman on Real Property, accompanied with oral explanations and references to leading cases, and lectures on actions to recover real property. Ten weeks. Professor HAYES.

Insurance. A course of lectures on Fire, Life, and Accident Insurance. Four weeks. Chancellor MCCLAIN.

Carriers. Study of cases, McClain's Cases on Carriers, (covering both carriers of goods and carriers of passengers), being used as a text-book. Six weeks. Chancellor MCCLAIN.

Criminal Procedure. Lectures, with recitations in McClain's Outlines of Criminal Law and Procedure. Three and one-half weeks. Professor ROHBACH.

Chattel Mortgages. A course of instruction by lectures with a printed synopsis. Three and one-half weeks. Professor SEEDS.

WINTER TERM.

Equity, and Equity Pleading. Recitations in Bispham on Equity. Lectures on Equity Pleading. Eleven weeks. Professor NEY.

Corporations. Lectures upon the general doctrines of the Law of Corporations, both private and municipal. Seven weeks. Professor ROHBACH.

Appellate Proceedings. Lectures upon the practice and procedure in Appellate Courts. One week. Judge ROBINSON.

Agency. A course of lectures. One week. Judge ROBINSON.

Taxation. A course of lectures. Two weeks. Judge KINNE.

Trial Practice. A course of lectures. One week. Judge DEEMER.

Damages. Recitations in Beale's Cases on Damages. Optional. Four weeks. Chancellor MCCLAIN.

SPRING TERM.

Partnership. Study of Cases. Paige's Cases on Partnership being used as a text-book. Four weeks. Professor HAYES.

Constitutional Law and Federal Jurisprudence. Lectures. Cooley's Principles of Constitutional Law and Black's Constitutional Law being used as text-books, and also study of selected cases. Ten weeks. Chancellor McCLAIN.

Attachment, Garnishment, and Execution. Lectures, with references to statutory provisions and leading cases. Three weeks. Professor HAYES.

Justice Practice. Lectures on Practice in Justices' Courts. One week. Optional. Professor HAYES.

Pleading. An advanced course, including common law and code pleading. Lectures. Three weeks. Professor HAYES.

International Law. Lectures with recitations in Snow's Cases on International Law as a text book. Optional. Four weeks. Chancellor McCLAIN.

Optional Studies.

Instruction is given in the Department in the following subjects, which are additional to the required work and are optional. Admission to these courses can only be secured by consent of the Faculty.

Roman Law. A course for one hour a week throughout the fall term, open to students of the Law Department, or of the Collegiate Department. The study of Justinian's Institutes, with special reference to the analogies, dissimilarities, and historical relations between Roman and English law. Essays and discussions. Professor ROHBACH.

State Law. In the spring term a course of instruction will be given upon the constitution, statutes, and decisions of any state or territory as to which three or more members of the Senior class ask instruction. Open to Seniors only. Chancellor McCLAIN.

Studies in Collegiate Department.

For the purpose of giving the law students all the advantages of the University which it will be practicable for them to make use of, it has been arranged that so many of them as can do so without interference with the regular studies required of them in the Law Department, may attend any classes in the Collegiate Department.

Special attention is called to the opportunity thus afforded for the study of elocution (in which separate classes are organized for law

students), and for pursuing any of the courses of study laid down in political science, in history, in logic, or in English. No extra charge will be made for such studies, but law students will be admitted to such classes only on the approval of the Law Faculty, and with the consent of the professor whose class they desire to enter.

Law Electives for Collegiate Students.

The Collegiate Faculty permits Seniors in that Department to take as elective studies in their Collegiate Course, and to receive credit therefor, any of the Junior law studies to the extent of thirty-six weeks' work of one hour a day, but this provision does not apply to students entering the Senior year from other colleges.

It is believed that, whether looked at as a means of mental discipline, or as a preparation for the duties of citizenship, or for the prosecution of business, a full course in the Law Department will be found for those who are properly prepared for it, and can pursue it as a part of a liberal education, fully equal to any course of study that can be pursued for the same length of time. If, however, a student deems it not practicable for him to pursue such a course of study after graduation from the Collegiate Department, he may derive some of the advantages of such study, and some insight into the principles and methods of the system of law under which he lives, by electing as part of his regular course some of the groups of studies above suggested.

Credit will be given to students in the Collegiate Department taking studies in this Department for work done, but no credit can be given to those students in respect to time, the statute requiring, for admission to the bar of the State, that the applicant shall have spent at least two years of nine months each in a law school, or two years of twelve months each, in the office of some practicing attorney. Therefore, while this Department gives credit for work done in any study taken with its classes, yet it will not give credit for time unless the student taking such study or studies shall have been duly enrolled as a student of this Department.

Moot Courts.

For the purpose of affording exercise in the application of legal principles to statements of facts, and in connection with instruction in

pleading and practice, moot courts have become a well recognized and important feature of the Law School. Two such courts are conducted in connection with the Department, holding their sessions on one or more afternoons of each week, each presided over by a member of the Faculty. It is deemed best to keep the members of the two classes separate in this, as in other work of the school, and it is thus possible to select the cases assigned so that they may relate to subjects on which the students have already had instruction. The Senior moot court will be organized at the beginning of the fall term, whilst that of the Juniors will not commence its work until the winter term, practical exercises in pleading being given the members of that class during the fall term, in connection with instruction in pleading and practice.

The method of conducting these courts is to give to two or more students, representing the attorneys in the case, a written statement showing the facts on which the action and defense are to be based. Pleadings are then prepared as they would be in an actual case. These pleadings are subjected to attack by motion or demurrer, and the issues of law or fact raised, are tried to the court, the statement of facts being regarded as the evidence offered on issues of fact.

Another method of trial has been introduced with success, which involves the proof by competent evidence of the facts shown by the statement. This gives practice in the examination of witnesses and in applying the rules determining the admissibility of evidence. During one term, trials are conducted with all the formalities usual in *nisi prius* courts, jurors being summoned and impaneled, witnesses subpœnaed, and instructions prepared and given. It is also recommended that the students form club courts for further exercise. Professors will give such assistance as is needed.

Literary Societies.

Three literary societies composed exclusively of students of this Department hold regular weekly meetings, furnishing to their members valuable training in debating and other exercises usually provided for by such organizations.

Library Facilities.

In commodious quarters on the same floor with the lecture-room is the Law library of eight thousand seven hundred volumes, to which the students have personal access. This library contains a full series of the reports of the Supreme Court of the United States and of the courts of last resort of thirty-three states, including all those whose reports are most frequently referred to; also the American Decisions, American Reports, and American State Reports, a collection of English Reports, which, with additions lately made, is almost complete, full series of the Reporter System and a large collection of the latest and best law text-books.

The Library is in charge of a regular librarian who renders valuable assistance to the students in the prosecution of their work.

The Library rooms are open for the use of students from 8 o'clock A. M. to 12 M., and from 1:30 to 5:30, and 7 to 9 o'clock P. M. of each school day, and during the forenoon of Saturday.

The University library, containing 32,000 volumes, is open to the students of this Department, as well as those of the other departments of the University, and books may be drawn from it under reasonable regulations. No extra charge is made for the privileges of either of these libraries.

Hammond Historical Law Collection.

A valuable collection of twelve hundred volumes relating principally to the Civil Law and the History of the Common Law has been given to the University by the widow of William G. Hammond, LL. D., the first Chancellor of the Law Department, to be kept in the Law library as a separate collection for the use of the students of the Department and others interested in such subjects. These books are in special cases, under the charge of the Law Librarian and accessible on request.

Lecture Hall.

The Law Department has the exclusive occupancy of the second floor of the central, or stone building, on the campus, which was erected for and used as the Capital Building before the removal of the capital of the State to Des Moines. The rooms on this floor are those

formerly occupied as legislative chambers. The lecture hall is furnished with arm-chairs provided with broad arm-rests for use in taking notes.

Fees and Expenses.

The rate of tuition established by the Board of Regents is $20 per term, of about twelve weeks, payable in advance, to the Secretary of the University. Each student upon passing his final examination, is required to pay the sum of $7 as a graduation fee, to cover the charge for diploma and for certificates of admission to the State and Federal Courts. There are no other fees or charges.

Other expenses may be made very reasonable. Good board and lodging can be had at from $3.50 to $4.50 per week, and this may be reduced to $2.50 or $3.00 per week by taking meals in clubs.

Cost of Books.

The books required for use in recitations, and with which the student must provide himself, are the following:

Bishop on Contracts; McClain's Synopses; Annotated Code of Iowa; Wambaugh's Cases for Analysis; Adams's Cases on Sales; Cooley on Torts; Volume 1, of Greenleaf on Evidence; McClain's Outlines of Criminal Law and Procedure; Norton on Bills and Notes; Tiedeman on Real Property; McClain's Cases on Carriers; Bispham's Principles of Equity; Cooley's Principles of Constitutional Law or Black's Constitutional Law; Paige's Cases on Partnership and the Law Bulletin.

The cost of required books will not exceed $45.00 for the Junior year, or $70.00 for both years.

The student will find it greatly to his advantage to provide himself with a good law dictionary, and if practicable, a copy of Blackstone's Commentaries in any edition. It is desirable, also, that the student bring with him or purchase, in addition to the above list of required books, as many as practicable of the following which are recommended as the leading and best books on the subjects which are taught by lectures; Walker's American Law, or Pomeroy's Municipal Law; Schouler's Domestic Relations; Stephen on Pleading; Pomeroy's Remedies and Remedial Rights, or Bliss on Code Pleading; Drake on Attachment; Benjamin, or Tiedeman, on Sales; Schouler on Bail-

ments and Carriers; Story, or Mechem, on Agency; Bates on Partnership; May on Insurance; Beach, or Morawetz, on Corporations; Curtis on Jurisdiction of Federal Courts; Cooley's Constitutional Limitations.

Any of the books mentioned may be procured through the Law Librarian from time to time, as needed, at a considerable reduction from list prices; they are not kept for sale by the book stores in Iowa City.

The Department owns about twenty-five sets of the text-books above mentioned as required in the course, which it will rent in sets to students, furnishing them all the books required for either year for $12.50 for the year. The rent sets do not include a law dictionary, nor the Law Bulletin. As there are sometimes more calls for rent sets than can be met, those who desire to rent books should make application in advance.

Enrollment and Preliminary Examinations.

Students may enroll at any time. It is better, however, to enter at the beginning of the term, and best to enter at the commencement of the school year.

Those who enter the Department are expected to have an English education at least equivalent to that generally given in the high schools of the State. A diploma, or certificate, showing the completion of a college or high school course, or a course of study in an academy, equivalent to a high school course, will be accepted in lieu of any examination. Students who have not such diploma, or certificate, must take a preliminary examination in the usual branches of a high school course, or present such evidence of proficiency therein, as the Faculty may require.

At the preliminary examination of September, 1896, each candidate was required to write a short essay, correct in expression, spelling, capitalization, punctuation, and paragraphing, on any one of the following subjects, the essay not containing less than three hundred nor more than six hundred words. The subjects were:

The causes leading to the Civil War; The settlement of Jamestown; The causes leading to the War with Mexico; Clay and contempor-

aneous history; The Monroe Doctrine; The settlement of New York by the Dutch; The results of the War of 1812.

Future examinations will be similar to the examination just now described, the subjects for essays varying from year to year.

Students wishing to study special subjects without graduation will be admitted without preliminary examination upon showing themselves qualified to pursue the studies desired.

Preliminary examinations will be held on Wednesday, September 15th, 1897, commencing at 9 A. M.

Admission to Senior Standing.

A student may be admitted to the Senior class who has studied law for one school year of at least thirty-six weeks in this or some other law school, or who has studied law in this or some other law school for at least ten weeks, and in, addition has read law under the direction of an attorney for such length of time as to make eight months' study. Time of practice as a licensed attorney in any state will be considered equivalent to a like period of reading under the direction of an attorney. If the claim for advanced standing is based upon other grounds than attendance in this school, certificates of the necessary facts must be presented when Senior standing is claimed.

In addition to the requirements as to time, it will be necessary that the applicant shall pass an examination, before admission to the Senior class, upon at least five of the principal subjects of the Junior year, and if he is a candidate for graduation it will be necessary, in addition to the five subjects before mentioned, that he shall pass upon all the subjects of the Junior year as well as those of the Senior year, at some time previous to his graduation. This rule applies to those who have been admitted to practice as well as to students of law.

The examinations for admission to the Senior class for those who have not previously completed the Junior course in the Department will commence on the first day of the University year, Wednesday, September 15, 1897.

While provision is thus made by which credit may be given for eight months' reading under the direction of an attorney, in lieu of corresponding time of attendance in this Department, not to exceed

two terms, yet the Faculty desires to say frankly that the student will find it difficult in this way to become sufficiently proficient in any of the Junior studies to pass the required examinations. The Faculty is not willing to impair the value of the Senior instruction to those who have prepared themselves for it in the Department, by admitting to the class those who are not qualified to carry on effectively the work of the year; nor is it to the interest of either the student or the school to admit to the Senior class any who, in order to be prepared for final examination and graduation, must fit themselves in so great a range of subjects that they cannot thoroughly master them. It must be borne in mind that it is not the number of pages read, nor the number of answers learned, which determines the student's attainments in law, but that discipline and development of the mind, and the habit of correct legal thinking, are essential elements of a legal education, and that for the acquirements of these, two years in a law school are not too long a time even for those who have the best preparation for entering. Experience has shown how imperfect, as a rule, is the preparation of those who study in offices, and how necessary systematic instruction is at the beginning of the student's course, and the Faculty strongly recommends that all the studies of the Junior year be pursued in law school, and that if but one year can be spent in school, the student shall commence his studies there and read in an office afterward. Even those who have had previous reading in an office will, it is believed, usually find the instruction in the Junior year to be of greater importance to them than that of Senior year, in obtaining a thorough and accurate knowledge of the law. The practical advantages of experience in a law office are not to be underrated, but such experience will prove of greater benefit after the principles of law have been acquired than at the beginning of the study.

Even in courses in which text-books are used students of the law school have a great deal of instruction regarding matters not fully developed in the books. Anyone who wishes to pass with credit the examinations for Senior standing, and to profit fully by the instruction in the Senior subjects, should not confine his attention to the Junior text-books, but should attempt to get an equivalent for the instruction supplementing those books. Candidates for advanced standing on office reading are therefore urged to master, in addition to the prescribed

text-books, the following books or parts of books: Pomeroy's Remedies and Remedial Rights; Anson on Contracts; Pollock, or Bigelow, on Torts; Bishop's Criminal Law; Tiedeman on Sales; Schouler on Bailments; the American notes in Chamberlayne's edition of Best on Evidence; Stephen's Digest of Evidence; Daniel on Negotiable Instruments.

Graduation.

Two years' study is essential to graduation, one year of which must have been spent in this school.

Students will be given credit for time of study in another school to the extent of one year, or under the direction of a practicing attorney to the extent of two-thirds of a year. For time of actual practice as a duly licensed attorney, the same credit will be given as for study under the direction of an attorney.

Before being recommended for graduation, the candidate who has pursued a portion of his studies elsewhere, must satisfy the Faculty of his proficiency in those studies by passing examinations therein.

Candidates for graduation must be of good character and must, upon being recommended by the Faculty, pass a final examination conducted at Iowa City by a committee of examiners appointed by the Supreme Court of Iowa, in accordance with the rules of that court, regulating admission to the bar. Upon passing such examination, the candidates receive the degree of Bachelor of Laws, and are admitted to practice in all the courts of the State of Iowa, and in the federal courts of the Northern District of Iowa, oaths of admission being administered in connection with their graduation: and they receive the usual diplomas, and certificates of admission. Those who are not twenty-one years of age may pass the examination and receive their diplomas, but cannot be admitted to practice until attaining that age.

Final examinations will be held only at the end of the University year.

Theses.

Each candidate for graduation in June, 1897, must present to the Faculty, on or before the third Wednesday in May, a theses upon some legal topic approved by the Faculty. Such thesis must be legibly written, or printed by typewriter, on paper 8x10½ inches in size of page,

leaving a blank margin of at least one inch at sides and at top and bottom. The theses shall not be less than 1,500 nor more than 2,500 words in length, exclusive of citations of authorities. In citing cases the names of the parties, as well as the volume and page of the report must be given. The character of the theses will be taken into account in determining whether the candidate is qualified to be recommended to the Examining Committee for final examination.

Beginning with the class of 1898 the same requirements with respect to theses will be recognized, except that all theses must be presented to the Faculty on or before the first Monday in April.

All theses become the property of the Department.

The subjects approved by the Faculty for the year 1896–97 are as follows. Others will be submitted for following years:

1. Dicuss the right of the State to regulate railroad charges and the extent to which such regulations may be carried, either by direct legislative action or by railroad commissions.

2. Suppose the drawee of a bill pays the amount to one claiming in good faith but under forged endorsement, can he recover from such person the amount so paid.

3. There is a stipulation in a promissory note that security is held therefore; can the indorsee of such note taken before maturity and for valuable consideration recover on the note without returning the security, supposing that such security has never been received by him, but has been wrongfully converted by the original payee.

4. Can there be a recovery under a contract to pay money in satisfaction of a tort which was already barred at the time the contract was made?

5. Is a mortgage to secure a pre-existing debt without a new consideration enforcible?

6. Is there a tort committed when one maliciously induces the servant of another to quit his service?

7. Is it possible to make one the owner of a legal estate in fee simple in lands in such a way that the estate shall not be liable to involuntary sale for his debts during his life?

8. Which is the better rule, that of the majority of the Court in Mathews & Co. vs. Mattress Co., 87 Iowa, 246, or that of the minority?

9. Discuss the liability for acts done in the name of a corporation,

when there had been an attempt to incorporate but a failure to comply with the mandatory requirements for incorporation.

10. Discuss the rights of a withdrawing member of a building and loan association, when he has complied with all conditions for the surrender of his stock, but upon surrender, he finds that there are no moneys on hand to pay for the stock surrendered.

11. The writ of replevin. Its history, origin, development, former use and use under code.

12. Discuss the protection afforded a bona fide purchaser of a negotiable instrument for value before maturity, where the note is stolen and where it is obtained by the payee by fraud.

13. Is Chapter 96, Laws of the 26th General Assembly of Iowa, forbidding the sale of cigarettees in the original package as imported constitutional? Draw any distinction you may see between the regulation of the sale of cigarettes and oleomargarine in the case of Plumley vs. Mass., 155 U. S., 461.

14. Discuss Section 2002 McClain's Code, making the railroad company liable for the negligence of an employe to one engaged in the operation of a railroad, as to what acts or employment bring an employe within the protection of this Section, in the light of Deppe vs. C. R. I. & P. Ry. Co., 36 Iowa, 52, and subseqnent decisions.

Prizes.

From the theses prepared and presented as above described by the candidates for graduation in the class of 1897, a committee chosen by the Faculty of the Department from the Examining Committee will select the five which show the highest merit as legal essays. To the writer of the one of these five which has the highest literary merit, from the standpoint of clearness, conciseness and accuracy of expression, will be awarded a prize of twenty-five dollars, offered by the Chancellor of the Department.

To each of the writers of the other four theses selected as above indicated, a prize of twenty dollars, given by the University, will be awarded by the same committee.

The Kinsman-McCloud Law Book Company, of Omaha, Nebraska, offered as a special prize for the year 1895-6, a set of Lawson's Rights

and Remedies (7 vols., and index) to the best thesis on the subject proposed by the Faculty, the award being made in the same manner as the other prizes, the theses written for this prize were not considered, however, as competing for any other prize. The subject for this special prize was as follows:

What do you think of the position that there is not a national common law? Is it reasonable and sound, or otherwise?

Beginning with the class of 1898, all theses prepared and presented as above described, will be examined by the Faculty of the Department for the purpose of determining whether the writer is qualified for graduation.

No prizes for theses will be offered after June 1897.

The prizes for 1895–6 were awarded as follows:

The Chancellor's prize to Rollo S. Granger.

The University prizes, all of these being equal in rank and value, were awarded to the following students, named in order of merit determined by the committee: Stevens A. Coldren, William H. Hughes, Alfred E. Walsh, Henry M. Troy, with special mention of thesis written by James M. Wilson.

The Kinsman-McCloud prize was awarded to John B. Ryan, with special mention of thesis written by Harry L. Keefe.

Any further information desired may be obtained by addressing the President of the University, or James A. Rohbach, Secretary of the Law Faculty, at Iowa City, Iowa.

Medical Department.

Faculty and Other Instructors.

CHARLES ASHMEAD SCHAEFFER, A. M., PH. D., LL. D.,
President.

PHILO JUDSON FARNSWORTH, A. M., M. D.,
Emeritus Professor of Materia Medica and Therapeutics.

JOHN CLINTON SHRADER, A. M., M. D., LL. D.,
Professor of Obstetrics, Gynecology, Clinical Gynecology, and Diseases of Children.

WILLIAM DRUMMOND MIDDLETON, A. M., M. D.,
Dean of the Faculty, and Professor of Surgery and Clinical Surgery.

LAWRENCE WILLIAM LITTIG, A. M., M. D., M. R. C. S.,
Professor of Theory and Practice of Medicine, and Clinical Medicine, and Assistant to the Chair of Surgery.

JAMES RENWICK GUTHRIE, A. M., M. D.,
Professor of Physiology and Associate Professor of Obstetrics, Gynecology and Diseases of Children.

ELBERT WILLIAM ROCKWOOD, B. S., M. D.,
Professor of Chemistry and Toxicology, and Secretary of the Faculty.

JAMES WILLIAM DALBEY, B. S., M. D.,
Professor of Ophthalmology.

CHARLES SUMNER CHASE, A. M., M. D.,
Professor of Materia Medica and Therapeutics

WALTER LAWRENCE BIERRING, M. D.,
Professor of Histology, Pathology and Bacteriology, and Curator of the Medical Museum.

JOHN WALTER HARRIMAN, M. D.,
Professor of Anatomy.

MARTIN J. WADE, LL. B.,
Professor of Medical Jurisprudence.

CHARLES MOORE ROBERTSON, A. M., M. D.,
Professor of Otology, Rhinology and Laryngology.

WILLIAM ROBERT WHITEIS, M. S., M. D.,
Assistant Professor of Histology.

GERSHOM H. HILL, A. M., M. D.,
Lecturer on Insanity.

FRANK THOMAS BREENE, D. D. S., M. D.,
Lecturer on Dentistry.

EMIL LOUIS BOERNER, PHAR. D.,
Instructor in Pharmacy.

WILLIAM EDWARD BARLOW, B. A.,
Demonstrator of Chemistry.

WILBER JOHN TEETERS, B. S., PH. C.,
Demonstrator of Chemistry.

JOHN PATRICK MULLIN, M. D.,*
Demonstrator of Anatomy.

ELI GRIMES, M. D.,
Demonstrator of Pathology and Bacteriology.

LEE WALLACE DEAN, M. S., M. D.,‡
Demonstrator of Anatomy.

WILLIAM GREEN,
Janitor.

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*Until June, 1897.

‡After June, 1897.

MEDICAL DEPARTMENT.

A thorough elementary preparation is required before entering on the course of medical lectures. The University affords a preliminary scientific course preparatory to the professional, and it is expected that many will avail themselves of this opportunity. In the branches of medicine there should be a thorough training in the principles before the practical portion is begun. For this purpose a careful presentation of the subjects is made by lectures, and the knowledge fixed by recitations and frequent reviews. Ample means of illustration are used, and the materials for demonstration are abundant. In the practical branches enough clinical material is found to illustrate the subjects taught.

The twenty-eighth annual course of lectures will begin on September 15, 1897, and will close on March 30, 1898. There will be a holiday vacation commencing Thursday evening, December 23, and ending Wednesday morning, January 5, 1898.

The course is divided into four years of twenty-six weeks each. It is the intention of the Board of Regents and the Faculty to increase the length of the annual course of lectures as soon as possible, and notice of such increase may appear in the next annual announcement.

Medical, Surgical, Gynecological, Eye and Ear and Laryngological Clinics, are held each week during the term. Attendance upon these is required of all students, excepting those engaged in laboratory work during clinic hours.

Outline of the Plan of Instruction.

Anatomy.

The lectures in anatomy will be illustrated by means of specimens, charts, models, dissections, and black-board figures. Special effort will be made to associate anatomical arrangement with clinical facts and methods of diagnosis.

During the first year the lectures will cover the subjects of osteology, syndesmology, the alimentary canal and associated structures, the vascular and respiratory systems, and the genito-urinary organs. These will be presented in full detail from their anatomical, mechanical, and functional aspects, attention being paid to practical developmental laws and relations of viscera to surface markings and neighboring structures,

In the second year the subjects covered during the first year will be carefully reviewed with additional reference to the medical and surgical anatomy. The nervous system and the anatomy of the special senses will be presented in detail not only by lectures but also by practical demonstrations to the class divided into small sections.

The third year will be devoted entirely to regional anatomy. The lectures during this year will at all times be illustrated by special dissections or surface marking upon the living subject.

Practical Anatomy.

The thorough study of this branch, for at least two courses, is made a condition of graduation. Facilities for obtaining material are such, under improved legislation in the State, that an abundance will always be provided for all who may apply. The demonstrators will always be ready to aid and direct the prosecution of these studies.

Upon the completion of each course of dissection, the student will be examined on the anatomy of the part dissected, and if the examination be satisfactory, a certificate to that effect will be given. No fee is required for dissecting material.

Physiology.

In this department the inductive method is very largely employed in imparting instruction. The lectures are profusely illustrated by

means of charts, diagrams, and blackboard figures, and the student is rendered practically familiar with the phenomena of the most important bodily functions of normal operation by the employment of experiments upon living animals as a means of demonstration. Twelve lectures will be given in the Junior year upon applied physiology of the nervous system.

Chemistry and Toxicology.

The course in chemistry extends through two years. In the first year the lectures are on general chemistry. The laboratory work consists, first, of analytical chemistry, including methods of testing for the metallic poisons, then the common medicinal substances are studied. The student learns methods of chemical manipulation, and the use of apparatus, and also becomes acquainted with the action of reagents, and of chemicals upon each other. The course includes the examination of drinking water from a sanitary standpoint, each student making a number of analyses of various wholesome and polluted waters. It concludes with the methods of quantitative analysis, which are of the most use to the medical practitioner.

In the second year, physiological chemistry is taken up. The lectures are in explanation and amplification of the laboratory work. The latter includes the study of the proximate principles of the body and their chemical changes. Artificial digestive experiments are made, their products being isolated and tested. The constituents of the blood are tested and the methods for the identification of stains are learned. The qualitative tests for the abnormal constituents of the urine follow, and the quantitative determination of such as are of importance. The course is completed by the identification of urinary sediments and calculi, and the analysis of various pathological specimens of urine. The lectures on toxicology treat of the physiological and chemical action of the principal poisons, as well as their antidotes. The methods of identifying these in food, excreta, etc., are explained and illustrated by experiments.

The work in practical chemistry is conducted in the new chemical laboratories of the University, in which the Medical department occupies rooms on the ground floor. These consist of rooms for the instructors, store rooms, and two large laboratories. They are well

lighted, and heated by steam. Hoods, connected with ventilating shafts, carry off offensive and injurious gases. The outfit is ample for demonstrating the general principles of Chemistry, as well as its application to medicine. Each student is supplied with a set of the necessary apparatus.

Histology.

The course in histology extends through the Freshman year and consists of a series of two didactic lectures and four hours laboratory work each week.

The histological laboratory is situated on the first floor, southeast corner of the Medical building, is well lighted and thoroughly equipped with microscopes and all necessary apparatus for carrying on the work. The laboratory work comprises the preparation and study of microscopic slides showing the minute structure of the different tissues and organs of the body.

The slides prepared by each student become his personal property.

Instruction is given in all forms of histological technique, hardening, embedding, section-cutting, staining and preparation of material for examination.

In the Freshman year the regular work in histology will be preceded by a number of lectures and laboratory hours devoted to the study of general biology.

During the Sophomore year opportunities will be offered to those who wish to work in embryology and special histology.

Pharmacy.

An outline course in pharmacy is specially provided whereby the student at the outset may familiarize himself with pharmaceutical processes, and the methods of preparing official preparations by actual laboratory practice.

Materia Medica.

This subject is presented during the Freshman and Sophomore years in progressive form. The introductory topics, such as definitions, dosage, modes and routes of administration of medicines, prescription-writing, with special reference to the detection and avoidance

of incompatibilities, will be presented at the beginning of each session before the classes jointly. The further consideration of the subject will be progressive, organic drugs being presented one session, inorganic the next. At the close of each session a test will be given covering the ground traversed during the session. Toward the close of the Sophomore year the entire subject will be reviewed and a final examination given. During the didactic lectures crude drugs will be presented from time to time illustrative of the subject. All official preparations from the same will be presented and briefly discussed during the course.

Therapeutics.

This branch of pharmacology, recognized as the distinctively scientific division of the subject, will be presented during the Junior and Senior years. Both general and special therapeutics will be outlined and discussed with special views to stimulate in the student a desire to prosecute methods of original research in the direction of studying the physiological action of drugs. To this end experiments will be made from time to time illustrative of such action upon the lower animals.

Applied Therapeutics.

In addition to the general course in therapeutics the Senior class will be given a special course upon applied or practical therapeutics, to be illustrated by bedside discussion of cases in the wards of the University Hospital.

Pathology and Bacteriology.

The course in pathology and bacteriology extends throngh the Sophomore, Junior and Senior years, and is presented by means of didactic lectures and laboratory work. The lectures are devoted to bacteriology and general and special pathology, and are illustrated by means of drawings, preparations from the Medical museum and specimens derived from post-mortem examinations.

The pathological and bacteriological laboratory is situated in the west hall on the second floor of the Medical building. It is thoroughly equipped with new microscopes of the most modern type, and all

apparatus necessary for carrying on every form of bacteriological research.

Each student is provided with a table, which includes a microscope and all necessary staining reagents with which to carry on the work required.

In the Sophomore year the lectures are confined to general pathology and the elementary principles of bacteriology. The laboratory work consists of two hours each week throughout the year, and is illustrative of the didactic lectures, comprising the preparation and study of slides showing the general pathological changes that occur in human tissues. An examination will be held at the close of the year.

In the Junior year the lectures are devoted to the pathology of tumors, and the special pathology of the different organs of the human body.

The laboratory work, consisting of two hours a week throughout the year, bears a direct relation to the lectures and comprises the preparation and study of slides showing the disease changes that occur in special tissues and organs, including a complete collection of tumors; furthermore embodying the study of the general characteristics of micro-organisms, the preparation of artificial media, and the mounting of slides of the different organisms, with special reference to the pathogenic bacteria that are of greatest interest to medical men.

Instruction is also given in the technique of making a post-mortem examination.

A final examination in pathology will be held at the close of the Junior year.

During the Senior year two hours each week are devoted to clinical microscopy, and advanced work in pathological histology and bacteriology.

Beginning the Thursday after Commencement, at 1:30 P. M., there is given a course in Practical Bacteriology, which continues for one month. The laboratory is open daily from 9 A. M. to 6 P. M., and the students become familiar with all the details of bacteriological technique. The number of participants is limited to twenty. Places at the tables are secured in the order of application and payment of fee.

Practice of Medicine.

The Chair of Theory and Practice of Medicine combines didactic and clinical instruction. Many of the subjects treated in the didactic course find illustration in the hospital amphitheatre, and pathological study is facilitated by post-mortem examinations, as well as by wet and dry preparations from the museum.

Medical Diagnosis.

Recitations for the Senior class will be held each week on this subject, the department of medical diagnosis receiving practical treatment here as well as at the clinic. The Junior class will receive practical instruction in physical diagnosis, including the use and application of all the instruments and methods of precision.

Surgery.

Surgery is taught—didactically—in lectures reviewed by daily class quiz, and in recitations by advanced students on prior work, practically—by actual surgical diagnosis and treatment of patients at the clinic by the members of the Senior class; also by a course of operative surgery for the same class in which all surgical operations are performed upon the cadaver. One hour each week is devoted to minor surgery and bandaging.

Obstetrics and Gynecology.

The instruction in these important departments is complete. All modern means for illustration are employed, and advanced students are carefully trained in the principal obstetric operations.

Ophthalmology.

The instruction in this branch combines didactic and clinical teaching. Two lectures a week are given in the anatomy, physiology, and pathology of the regions involved, and the Wednesday clinic is devoted to the diagnosis and treatment of their diseases. Large numbers of cases appear at these clinics, and a great many operations of all kinds are performed.

Otology. Laryngology and Rhinology.

The instruction in this branch is given by didactic and clinical teaching, one lecture and one clinic being given each week. Much attention is directed to the methods of examination and treatment of cases. The throat and nose clinic being large, enables all students to become familiar with the use of instruments, all being allowed to treat patients under the supervision of the instructor. It is the aim of the course to familiarize each student with the normal as well as the pathological conditions of the throat and nasal passages. The clinic room has been especially fitted up for the work and is in itself complete.

Medical Jurisprudence.

The essentials, to the practitioner, of this important department of medicine will be fully treated.

Insanity.

This subject is discussed as concisely as possible, with the special needs of the general practitioner constantly in view, and material appearing at the clinics from to time, during the term, is utilized in its illustration. A course of lectures on this subject will be delivered during the latter part of January.

Sanitary Science and Public Hygiene.

One lecture a week will be delivered on matters pertaining to sanitary science and public hygiene.

Clinics.

The clinics have been well and abundantly supplied with material. The patronage of the hospital is such that a variety of cases is presented for operation and treatment. The hospital is open for the reception of patients during the entire year.

Every case is fully utilized as a means of instruction by a system of examination in which advanced students are required to diagnosticate disease and suggest treatment, before the class, subject to the correction of the clinical teacher.

Clinical Patients.

Medical cases should be referred to Professor L. W. Littig; surgical cases to Professor W. D. Middleton; gynecological cases to Professor J. C. Shrader; eye and ear cases to Professor J. W. Dalbey; throat and nose cases to Prof. C. M. Robertson.

Museum.

The Museum contains a large and interesting collection of morbid and other specimens, furnishing valuable aid to instruction in its large amount of material illustrative of pathological and normal conditions. This is constantly drawn upon as a means of demonstration.

Physicians are earnestly requested to send to the curator any specimens of healthy, morbid, or comparative anatomy, for all of which favors due credit will be given by labeling the specimens with the name of the donor before placing them in the museum.

Medical Library.

The Ranney Memorial Medical Library, consisting of a large number of works especially devoted to insanity and mental diseases, is open for consultation, together with a well selected list of books on general medical subjects to which are added each year the latest works and the latest editions. The library is supplied with the current medical journals, and will be open every day of the session.

Medical students have also the privilege of drawing books from the general library of the University which contains over 40,000 volumes.

The class which graduates in 1898 is the last one to complete the course in three years. The following is an outline of the work for this class.

SENIOR YEAR.

LECTURES, RECITATIONS, AND CLINICS, EACH WEEK.

Pathology and Pathological Anatomy—Two lectures and one recitation.

Theory and Practice of Medicine—Three lectures; one recitation; one and one-half hours of clinic.

Medical Diagnosis—One hour.

Surgery—Three lectures; one recitation; two hours clinic.

Surgical Dressing—One hour.

Toxicology—One lecture.

Obstetrics and Gynecology—Four lectures; one recitation; two hours clinic.

Therapeutics—Two lectures; one recitation.

Ophthalmology—Two lectures; one and one-half hours clinic.

Otology, Laryngology and Rhinology—One hour lecture, and clinic.

Medical Jurisprudence—One hour, after the holidays.

Sanitary Science and Hygiene—One hour.

The following is an outline of the work of the four year course.

FRESHMAN YEAR.

LECTURES AND RECITATIONS, EACH WEEK.

Anatomy—Four lectures; one recitation.

Physiology—Three lectures; one recitation.

General Chemistry—Three lectures; one recitation.

Materia Medica—Two lectures; one recitation.

Histology—Two lectures; one recitation.

Pharmacy—Ten lectures during the session.

Laboratory work for the session as follows:

Chemistry—One hundred and sixty hours.

Biology and Histology—One hundred hours.

Pharmacy—Thirty hours.

Bandaging—Twenty-six hours.

Dissecting—One course.

Final examination in General Chemistry, Histology, and Pharmacy, also, examination (not final) in Physiology, Anatomy and Materia Medica.

SOPHOMORE YEAR.

LECTURES AND RECITATIONS, EACH WEEK.

Anatomy—Four lectures; one recitation before holidays, two after holidays.

Physiology—Three lectures; one recitation before holidays, two after holidays.

Physiological Chemistry—Two lectures.

General Pathology—Two lectures.

Materia Medica—Two lectures; one recitation.

Obstetrics—Two lectures.

Bacteriology—Twelve lectures during the session.

Physical Diagnosis—One hour.

Hygiene—One hour.

Laboratory work for the term as follows:

Chemistry—Sixty hours.

General Pathology—Fifty-two hours.

Dissecting—One course.

Embryology—Optional.

General University clinics, when not otherwise engaged.

Final examination in Anatomy, Physiological Chemistry, Physiology, and Materia Medica.

JUNIOR YEAR.

LECTURES, RECITATIONS, AND CLINICS, EACH WEEK.

Theory and Practice of Medicine—Four lectures; one recitation.

Surgery—Three lectures; one recitation.

Pathology—Two lectures; one recitation.

Therapeutics—Two lectures; one recitation.

Obstetrics—Two lectures; one recitation.

Gynecology—Two lectures; one recitation.

Toxicology—One lecture.

Applied Anatomy: Medical, Surgical, and Nervous—Two lectures.

Applied Physiology of the Nervous System—Twelve lectures during the session.

General Medical, Surgical, Gynecological, and Ophthalmological Clinics—Seven hours.

Laboratory work for the term as follows:

Pathology—Fifty-two hours.

Bacteriology—Fifty-two hours.

Final Examination in Obstetrics and Therapeutics.

SENIOR YEAR.

LECTURES, RECITATIONS, AND CLINICS, EACH WEEK.

Theory and Practice of Medicine—Four lectures; two recitations.

Surgery—Three lectures; one recitation.

Special Pathology—Two lectures; one recitation.

Practical Therapeutics—One hour until the holidays.

Gynecology—Two lectures; one recitation.

Ophthalmology and Otology—One lecture.

Laryngology and Rhinology—One lecture.

Dermatology—One lecture after holidays.

Pædiatrics—One lecture after holidays.

Operative Surgery—Twelve hours during the session.

Operative Obstetrics—Twelve hours during the session.

Medical Jurisprudence—Twelve lectures during the session.

Dentistry—Six lectures during the session.

Insanity—Twelve lectures during the session.

General Medical, Surgical, Gynecological, Ophthalmological, and Laryngological Clinics—Seven hours.

Laboratory work:

Special Pathology—Two hours a week.

Final Examination in Practice of Medicine, Surgery, Gynecology, Pathology and Ophthalmology.

TEXT-BOOKS, AND BOOKS OF REFERENCE.

The following are recommended by the Faculty:

Medical Dictionary—Gould, Duane, Dunglison.

Anatomy—Gray, Quain, Morris, Treve's Surgical Applied Anatomy.

Dissectors—Holden, Heath, Ellis.

Comparative Anatomy—Wiedersheim, Jeffery Bell, Howell.

Physiology—Landois and Stirling, Foster, Flint, Kirk.

General Chemistry—Simon, Witthaus, Roscoe, and Schorlemmer.

Physiological Chemistry—Pellew, Vaughn and Novy.

Urine Analysis—Purdy, Neubauer and Vogel.

Toxicology—Reese, Wormley, Woodman and Tidy.

Surgery—Park, American Text-Book of Surgery, Roberts, Wyeth, Gerster, Stimson on Fractures and Dislocations, Wharton's Minor Surgery and Bandaging.

Pathology—Green, Ziegler, Delafield and Prudden.

Bacteriology—Abbott, McFarland, Crookshank, Sternberg.

Practice of Medicine—Osler, Strumpel, American Text-Book of Theory and Practice of Medicine, Roberts, Flint, Bartholow, Loomis.

Medical Diagnosis—Vierordt, Musser, DaCosta, Flint.

Obstetrics—American Text-Book of Obstetrics, Lusk, Davis, Parvin, Leishman, Playfair, King.

Obstetric Surgery—Grandin and Jarmin.

Embryology—Minot, Manton.

Gynecology—Skene, Thomas and Munde, Garrigues, American Text-Book, Pozzi, Davenport, May's Manual, Clinical Gynecology, Keating and Coe.

Materia Medica—White and Wilcox, Potter, Bartholow.

Therapeutics—H. C. Wood, Hare, Potter, Farquharson.

Diseases of Children—J. L. Smith, Goodhart, Starr.

Medical Jurisprudence—McClellan's Civil Malpractice, Wharton and Stille, Beck, Elwell.

Histology—Stoehr, Piersol, Schafer, Stirling.

Ophthalmology—Fuchs, Juler, Noyes, Nettleship on the Eye.

Otology—MacBride, Roosa, Buck, Politzer.

Laryngology and Rhinology—Bosworth, Burnett, Soujous, Ingals, Browne.

Insanity—Lewis' Text-Book of Mental Diseases, Stearns, Clouston's Mental Disease.

Dermatology—Jamison, Hyde, Duhring, Crocker.

Hygiene and Sanitary Science—Wilson, Rohe, Buck.

The first book mentioned in the foregoing list is recommended for preliminary reading, with the exception of Chemistry. In this, "Remsen's Introduction to the Study of Chemistry" is recommended.

Text-books and books of reference can be obtained at an average cost per volume of from $3.00 to $5.00.

It is of far greater advantage to the student, during the College course, to study and review a single text-book in each department than to read several cursorily. It is, therefore, advised that a single work, in each department recommended above, be chosen and carefully studied, while any other may be used for reference and subsequent perusal.

Tuition.

The fee for tuition is $65.00 for each year, of which $40.00 is payable on or before October 1, and the balance on or before January 10. All fees must be paid when due to the Secretary of the University, William J. Haddock, and students who do not pay these when due will be suspended from the department until payment has been made.

There are no extra fees whatever, but for each laboratory course in chemistry, also for that in practical pharmacy, there is required a deposit of $3.00 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any deducted,) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement is now in effect, and will be understood to apply to all students in the department, entirely irrespective of the date of matriculation.

Alumni of this department will be admitted to lectures and clinics free of charge, but will pay the usual laboratory fees.

Graduates of other colleges which are recognized by this department will be admitted to full lecture privileges upon paying the matriculation fee and a fee of ten dollars and the usual laboratory fees.

A certificate of attendance will be issued to each student during the last week of the session.

Students upon arrival will apply for all needed information to the Secretary, Dr. E. W. Rockwood.

Requirements for Admission.

1. Credible certificate of good moral character signed by two physicians of good standing in the state from which the applicant comes.

2. Graduates or matriculants of reputable colleges, or graduates of high schools of the first grade, or of normal schools established by state authority, may be admitted without examination upon presentation of satisfactory credentials, provided, that in each case, at least one year of Latin has been included in the course. All candidates for admission must present their credentials, or apply for a permit for examination at the office of the President of the University not later than noon of Tuesday, September 14th, 1897.

Examination for admission will embrace the subjects usually taught in the high schools of Iowa, incuding one year's Latin, which subject may, however, be made up before entering upon the second year's course. In September, 1897, those who have no diploma will be examined in Latin (one year), Physics (one year), English, U. S. History, Arithmetic, Algebra through Quadratics, plane and solid Geometry, and Botany or some other science.

3. Students from other medical schools must present credentials or be examined as stated above.

This school is a member of the Association of American Medical Colleges, and adheres to the requirements of that Association.

Combined Scientific and Medical Course.

Arrangements have recently been made with the Faculty of the Collegiate Department by which it will be possible for a student to complete the course in Science and the course in the Medical Department in six years, thereby obtaining the degrees B. S. and M. D. This combined course is especially recommended to all students who intend to enter the profession of medicine.

COMBINED COURSE LEADING TO THE DEGREES OF B. S. AND M. D.

First Year.

German, 5, or Latin, 4 or 5,*

Mathematics, 5, and Drawing, 2; or Mathematics, 3, History, 2, and Drawing, 2; or Mathematics, 5, and History, 2.

English, 3.

Military Drill, 3.

Second Year.

German, 3, and English, 2; or German, 3, and Economics, 2; or Latin, 5; or Greek, 5.

Physics, 5.

Animal Morphology and Physiology, with Histology, 5.

Military Drill, 3.

Third Year.

French, 5; or Greek, 5; or Latin, 5. (At least one year of Latin required).

Chemistry, 5.

Botany (fall and winter) and Histology (spring), 5.

Anatomy (fall and winter) and Dissection (spring), 4.

Military Drill, 3.

Fourth Year.

Anatomy, 5.

Physiology (Medical), 4.

Physiological Chemistry, 2, with laboratory work.

General Pathology, 2.

Materia Medica, 3,

Obstetrics, 2.

Physical Diagnosis, 1.

Bandaging, 1.

Pharmacy. 40 hours.

Dissecting when possible.

Embryology and Bacteriology (spring).

*The figures refer to the number of exercises per week.

Fifth Year.

Junior Medical, with electives in the spring term.

Sixth Year.

Senior Medical, with electives in the spring term.

Admission to Advanced Standing, Three Years' Course.

Those who have attended two courses will be admitted to the Senior class upon passing an examination in the branches taught during the first and second years, and showing that they done as much preliminary work as is required for entrance to this department.

Advanced Standing, Four Years' Course.

No student is admitted to advanced standing in this department without such an examination as shall show that he has done work elsewhere equivalent to that required of students in this department.

Students from other accredited colleges who have attended one course of lectures, will be admitted to the Sophomore class upon passing an examination in the branches taught during the first year.

Those who have attended two courses will be admitted to the Junior class upon passing an examination in the branches taught during the first and second years.

Those who have attended three courses will be admitted to the Senior class upon passing an examination in the branches taught during the first, second, and third years.

Graduates in Pharmacy, upon examination as above, may enter the Sophomore class.

Graduates of Dental schools in good standing, will be admitted to the Sophomore class upon passing the entrance examination only.

Graduates from Veterinary colleges in good standing, will be admitted to the Sophomore class upon passing the entrance examination.

In all cases those who enter from other schools with advanced standing must comply with the requirements for admission, page 22.

Requirements for Graduation.

1. The candidate must be twenty-one years of age.
2. He must be known to be of unexceptionable moral character.

3. He must have been engaged in the study of medicine for four years. This includes the time spent with a preceptor, who must be a practitioner in good standing, and attendance upon lectures as stated in the next paragraph.

*4. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four coures of lectures shall not be less than six months of twenty-four weeks, and not more than *one* of the four courses shall be within the same year.

5. The candidate must have satisfactorily completed at least two courses in Practical Anatomy.

6. The deportment during the term must have been unexceptionable.

7. Attendance upon all lectures, clinics and other instruction in the course must have been in accordance with the requirements of the department.

8. All members of the Freshman class will be examined in General Chemistry, Histology, Physiology. Anatomy, Materia Medica, and Pharmacy, at the end of that year. The examination in General Chemistry, Histology, Pharmacy, and Materia Medica will be final should the student show the required proficiency.

9. Members of the Sophomore class at the end of that year must pass satisfactory examinations in Anatomy, Physiology, Physiological Chemistry, and General Pathology.

In case of failure to pass any of these examinations, the student may be re-examined during the first ten days of October, or of January, or at the end of the next session.

Students of the Senior class must notify the Secretary of the Faculty in writing, during the second week in February, of their intention of becoming applicants for the degree of Doctor of Medicine, at the same time presenting a certificate of legal age, and of good moral character, also the receipts from the Secretary of the University, showing that all fees have been paid.

During the last week of the term, having complied with the other

*Students completing three full courses not later than March, 1898, may present themselves for graduation under the old plan of three courses of study, and one year with a preceptor.

requirements, they must pass a satisfactory examination in Practice of Medicine, Surgery, Obstetrics, and Gynecology, Therapeutics, Ophthalmology, and in any other subjects taught, if so directed by the Faculty at the beginning of the term.

Class standing, recitation marks, together with Demonstrators' reports and final examinations, will be taken into consideration when determining the candidate's fitness to receive the medical degree.

The Medical Building

Is located on the south end of the campus, in a line with the other University buildings. It is one of the best and most commodious medical college buildings in the west. It comprises a basement for general purposes, the first floor containing the Secretary's office, the professors' rooms, the histological laboratory, the medical library and reading room, a lecture room, and the janitor's room.

On the second floor is a spacious and well-lighted pathological and bacteriological laboratory supplied with a sufficient number of microscopes for class-work, and with other appliances; prosector's room, and general Faculty room, and a large amphitheater provided with opera chairs for two hundred and sixty-six students.

The whole of the third floor (80x36 feet) is used as a dissecting room, is supplied with sinks and water, and each table is lighted with gas.

The whole building is heated with steam and is well ventilated.

University Hospital.

The Twenty-sixth General Assembly levied a tax for the erection of new buildings for the University, and by the action of the Board of Regents the first year's tax, estimated at somewhat more than fifty thousand dollars, will be devoted to the building and equipment of a Hospital. Its capacity when completed will be about 120 beds and it is expected to be ready for the reception of patients by the opening of the session of 1897–98. This will add to the equipment of the Medical Department what it has so long needed. The University Hospital will be in all respects modern and without a superior in the west.

With an administration building thoroughly furnished; with large and commodious wards as well as private rooms, with a clinical amphitheatre that will comfortably seat two hundred or more, and with separate surgical, gynecological, medical, ophthalmological and laryngological operating rooms together with a well supplied Free Dispensary open throughout the year but little is left to be desired.

It is confidently believed that the students who make the Medical Department of the University the school of their choice will find in all its departments complete and perfect equipment, both for didactic and illustrative instruction.

The University Hospital Training School for Nurses.

Connected with the Medical Department of the University, the School for Nurses offers a two years' course of training to women who desire to enter the profession of nursing. The course of instruction comprises practical work in wards, theoretical work in class and lecture rooms and a complete course in invalid cookery.

The work is divided into Junior and Senior years, as follows:

Junior Year. Class work, Anatomy, Physiology, Materia Medica, Practical Nursing.

Lectures on Hygiene, Anatomy, Physiology and on Nursing,—Medical, Surgical and Gynecological.

Senior Year. Class work, Obstetric Nursing, Care of Infants, After care of operative cases.

Lectures on Bacteriology, Obstetrics, Diseases of Children, Surgical Technique, Special Nursing.

Application for admission must be made to the Superintendent of Training School, University Hospital.

Internes.

A number of appointments as Internes in State institutions are made each year from the graduates of the Medical Department. These are awarded to such of the applicants as the Faculty judge best prepared for the position, the successful candidates being allowed to select, in the order of their rank, from those which are available.

In March, 1897, the following named graduates were appointed:

Dr. C. S. Cilley, Mercy Hospital, Davenport.

Dr. P. O. Esbjoern, University Hospital.

Dr. P. O. Neraal, Hospital for the Insane, Independence.

Dr. Conrad De Jong, Hospital for the Insane, Clarinda.

Board in Iowa City can be obtained for from $2.00 to $3.00 a week; rooms from $2.00 to $8.00 a month. Many students procure rooms and board in clubs, which materially reduces the cost.

Graduates of this school are requested to immediately acquaint the Secretary of the Faculty with their postoffice addresses, and to inform him promptly of any change of residence.

For any further information, or for full announcements, address Dr. E. W. Rockwood, Secretary of the Medical Faculty, Iowa City, Iowa.

Homoeopathic Medical Department

Faculty and Assistants,

CHARLES A. SCHAEFFER, A. M., PH. D., LL. D.,
President.

WILMOT H. DICKINSON, M. D.,
Professor of Theory and Practice, and Clinical Medicine, and Dean of the Faculty.

JAMES G. GILCHRIST, A. M., M. D.,
Professor of Surgery and Surgical Gynecology, and Registrar of the Faculty.

CHARLES H. COGSWELL, M. D.,
Professor of Obstetrics and Diseases of Women.

FRANK J. NEWBERRY, M. S., M. D., O. et A. Chir.,
Professor of Ophthalmology, Otology, and Pædology.

GEORGE ROYAL, M. D.,
Professor of Materia Medica and Therapeutics.

THEODORE L. HAZARD, M. D.,
Assistant to the Chair of Materia Medica.

FRED J. BECKER, M. D.,
Assistant to the Chair of Surgery.

RALPH W. HOMAN, M. D.,
Assistant to the Chair of Ophthalmology, etc.

SAMUEL N. WATSON, A. M., M. D.,
Assistant to the Chair of Theory and Practice.

ADELE P. KIMBALL, M. D.,
Matron.

RAYMOND E. PECK, M. D.,
House Surgeon.

LEORA JOHNSON, M. D.,
Clinical Assistant to the Chair of Surgery.

Additional Instructors from the Medical Department.

JOHN W. HARRIMAN, M. D.,
Professor of Anatomy.

JAMES R. GUTHRIE, A. M., M. D.,
Professor of Physiology.

ELBERT W. ROCKWOOD, A. M., M. D.,
Professor of Chemistry and Toxicology.

WALTER L. BIERRING, M. D.,
Professor of Normal and Pathological Histology.

LEE WALLACE DEAN, B. S., M. D.,
Demonstrator of Anatomy.

WILLIAM R. WHITEIS, B. S., M. D.,
Demonstrator of Normal Histology.

W. E. BARLOW, A. B.,
Demonstrator of Chemistry.

GERSHOM H. HILL, A. M., M. D.,
(Superintendent of the Hospital for the Insane at Independence). Lecturer on Insanity.

EMLIN MCCLAIN, A. M., LL. D.,
Lecturer on Medical Jurisprudence.

Examiners.

W. BANCROFT, M. D., Keokuk,

P. R. TRIEM, M. D., Manchester,

A. S. HANSEN, M. D., Cedar Falls.

HOMOEOPATHIC MEDICAL DEPARTMENT.

The twenty-first annual course of instruction will open on Wednesday, September 15, 1897, and close on Tuesday, March 29, 1898. The opening lecture will be given by Prof. Royal at 4 P. M. in the amphitheater. The course of study extends over five years, one year being pre-martriculate, under a preceptor, and four years undergraduate. Men and women are admitted on absolutely equal terms, no distinction whatever being made between them. The large and well equipped laboratories in the University, the hospital facilities afforded by the union of the college and hospital under one roof, and the opportunity for collateral study in any department of literature or science, furnishes facility for securing an education in medicine not to be surpassed. The fact that our undergraduates are frequently called upon to occupy positions as demonstrators in other schools, is a sufficient proof of the superior advantages accruing from connection with a large University. A course has been authorized continuing over six years, which will enable the student to attain the degree of B. S., in addition to the medical degree.

Admission.

The requirements for admission are the same in all departments of the University, viz: the possession of a diploma from a high school approved by the University, or some equivalent, as the completion of the Freshman year in a college of letters, of approved standing, with a sufficient knowledge of Latin. Failing in these requirements, the applicant for admission to the Freshman class must pass an examination in English scholarship, and Latin sufficient to admit to the Freshman class in the Collegiate Department. Applicants for admission to advanced standing must present evidence that they have attended one

or more sessions in a reputable medical college, and will be admitted to such class as they may prove themselves qualified to enter. All applicants for admission will apply to the examining committee in the President's office, on Tuesday, or Wednesday, September, 14 or 15, 1897. If admitted they will then report for enrollment and assignment of seats at the Registrar's office, department building on Dubuque street. All fees must be paid to the Secretary of the University, *and to him only.*

Advancement to higher classes is secured only by examination, oral and written, combined with the quiz record and class standing. An average of 65 per cent. must be secured in any one study to pass that chair; an average of 75 per cent. in all the examinations is necessary to pass to a higher class, and to secure a degree. A failure to pass in two or more studies will stop advancement until the conditions are satisfied. A failure in one study will not stop advancement, but the student must pass a satisfactory examination in that study before the close of the year to which he is promoted. The Faculty reserve the right to determine the class, which any student shall enter, in the case of applicants who have had one or more years in other medical schools.

Graduates of non-homœopathic medical colleges may be admitted as graduate students, as follows: If an *ad eundem* degree is sought they must matriculate in the University, and pay a lecture fee and an examination fee, passing an examination in the therapeutics of the branches taught in this Department. If a degree is not sought a matriculation fee is to be paid, and such laboratory expenses as may be necessary, together with a lecture fee, if a full course is taken.

Alumni of this school will be admitted to all lectures and clinics free of charge.

By order of the Board of Regents no student will be enrolled until all necessary fees have been paid.

In case any student is unable to pay the fees at the proper time, such student may, on application to the Dean of the Department, be granted an extension.

Students who do not pay the proper fees or avail themselves of the provision above mentioned, will be suspended from the Department until such fees are paid.

Tuition Fees.

The fee for tuition is sixty-five dollars ($65) for each year, of which forty dollars ($40) is payable on or before October 1st, and the remainder on or before January 10th. There are no extra fees whatever, but for each laboratory course in chemistry, there is required a deposit of $3, to cover breakage, and to ensure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student.

The above statement of fees is now in effect, and will apply to all students in the Department, irrespective of the date of matriculation.

Anatomy.

Anatomy is studied during the Freshman and Sophomore years. The course is a very thorough one, utilizing all the modern aids to teaching. Whenever possible the student will have the opportunity, by actual inspection of material, to become familiar with the appearance, texture, and physical characters of all structures. Practical anatomy, or dissection, is absolutely essential to promotion to higher classes, and is most thoroughly taught, the supply of material being abundant. Each student is required to make two dissections, one each year. On the completion of a dissection, a rigid examination will be held, which will entitle to a certificate to that effect. Without such evidence of having made two dissections, in a manner satisfactory to the Demonstrator, a student cannot be examined for graduation. Text-book: Gray, Nancredes' Essentials.

Physiology.

Physiology is studied in the Freshman and Sophomore years. In this subject the inductive method is very largely employed in imparting instruction. The lectures are profusely illustrated by means of charts, diagrams, and black-board figures; and the student is rendered practically familiar with the phenomena of the most important bodily functions in normal operation by the employment of experiments upon living animals as a means of demonstration. Text-book: Flint, Dalton, or Foster.

Histology.

The work in this department runs through the Freshman year. One lecture a week will be given, many of them being illustrated by means of the stereoptican. Two hours each week are devoted to laboratory work, in the new histological laboratory, which is commodious, well-lighted, and supplied with thirty-six new compound microscopes, with all necessary accessories, dissecting microscopes, microtomes of various kinds, injecting apparatus, turn-tables, etc.

Each student is furnished a microscope, reagents and apparatus, is taught the use of the microscope, and does, or has demonstrated before him, the general technique of the subject of histology, hardening, embedding, sectioning, staining, mounting, etc.

Histological injections are made before the class. During the term the student prepares for himself a series of slides, illustrating the ultimate distribution of the blood, and cellular structure of normal tissues and organs. Klein's Manual of Histology is the text-book used.

Chemistry.

The work in chemistry is carried on during three years. In the Freshman year the course consists of lectures and laboratory work. The lectures treat first of the general principles of the science; then the subjects of interest to the student of medicine are discussed. Especial attention is paid to the compounds found in the body, with their functions and chemical changes. Medicinal and poisonous substances, and such as are used in practical work are also considered.

In the laboratory the student begins with tests for the metals, particularly the poisonous ones, and passes to the analysis of complex substances. He learns methods of manipulation, and becomes acquainted with the properties and actions of reagents. In the latter part of the course urine is studied; quantitative and qualitative tests are made for its pathological constituents, and such normal ones as are of importance to the physician.

The course includes the methods for the sanitary examination of water, and those employed in quantitative analysis.

In the Sophomore year physiological chemistry is taken up on the same general plan. The lectures are in explanation and amplification

of the laboratory work. The latter includes the study of the proximate principles of the body, and of their chemical changes. Artificial digestive experiments are made, their products being isolated and tested. The constituents of the blood are tested, together with the methods for identification of stains. The qualitative tests for the abnormal constituents of the urine follow, and the quantitative determination of such as are of importance. The course is completed by the identification of urinary sediments and calculi; and the analysis of various pathological specimens of urine.

In the Junior year toxicology is taken up. Instruction in this branch is given by means of weekly lectures, supplemented by quizzes. The general principles are first considered, then the most important of the poisons are treated separately. Text-books: Simon, or Roscoe and Schorlemmer, Andrews' Analytical.

Theory and Practice.

Regular attendance on this branch of medical study will be required only of the Junior and Senior classes; but it is desirable that the Sophomore class attend the lectures as often as their other duties will permit. The teaching will be didactic and clinical.

General and special pathology will be taught according to the latest investigations into the etiology and nature of disease.

It will be the aim of the occupant of this chair to teach only that which has secured the sanction of competent observers, and which has been confirmed by abundant clinical experience.

In teaching the relation of drug pathogenesis to semieology the well established principles of homœopathic therapeuties will be closely and consistently followed.

Attendance upon clinics will be obligatory upon Seniors, Juniors and Sophomores, but optional with the Freshman class.

The lecture room being under the same roof with the hospital furnishes admirable opportuities for bed-side instruction. The lectures will be illustrated by diagrams, wax and papier-maché models, and pathological specimens from the museum of the department in order to enhance their usefulness. No efforts will be spared to prepare the student to become a successful practitioner.

The books recommended are as follows: Dickinson's Theory and Practice, Arndt's System of Medicine, Raue's Special Pathology, Goodno's Practice. For reference: Pepper's Text-book of Theory and Practice of Medicine; Stevens' Manual of Pathology.

Ophthalmology and Otology.

During the Junior and Senior years instruction in diseases of the eye and ear will be both didactic and clinical. Special stress is laid upon the diagnosis and treatment of those diseases which will most often present themselves in the work of the general practitioner. The didactic teaching is illustrated by models and drawings. The clinics are large and varied, opportunity being thus given to examine and treat the cases presented. Text-books: Norton, Buffum, Angell.

Laryngology and Rhinology.

Instruction is given in rhinology and laryngology to the Junior and Senior classes by weekly lectures and clinics. Students are assigned cases for treatment, and given ample opportunity to become expert in the use of the laryngoscope, rhinoscope and other instruments employed in the diagnosis and treatment of the various diseases. Text-books: Ivins or Brown.

Pædology.

Weekly lectures and recitations are given on diseases of children to the Junior and Senior classes. The subjects taken up are the diseases of infancy, as well as early childhood, and while largely treated by the didactic method, clinical demonstrations are used whenever possible. Text-books: Tooker, Fisher.

Materia Medica.

Students will receive instruction from this chair during the entire course. The Freshmen will be given two lectures each week during the first half of the year. Ten lectures will be given on the organon, and ten on institutes and pharmacology.

The Sophomores and Juniors will be instructed together. Four hours each week will be devoted to lectures, recitations, and quizzes.

The minerals will be considered during the term 1897–98. A brief review of the toxicological and physiological effects of the drug will be given, then the most prominent and characteristic symptoms. These symptoms will be grouped as they have been found useful for therapeutic purposes. The Seniors will be allowed to attend and review the lectures given the Juniors, and in addition will be given two hours each week. These two hours will be devoted entirely to practical work. Clinical cases will be presented for which each student will be required to prescribe. The remedies thus presented will be thoroughly studied and compared with others which are applicable to the various manifestations of the disease under consideration.

Text-books: Organon; Dewey's Essentials of Materia Medica; Farrington's Clinical Materia Medica; Dunham's Homœopathy and Science of Therapeutics; Malcolm and Moss' Regional and Comparative Materia Medica, and Allen's Hand-book of Materia Medica.

Surgery.

This study extends through the entire course. Minor surgery is taught during the Freshman year, including bandaging. In the Sophomore and Junior year surgical emergencies is taught, including such topics as anesthesia, shock, hemorrhage, wounds, fractures, and dislocations. In the Senior year surgical pathology, general and special, is thoroughly gone over. The method of instruction is a combination of the didactic and practical. The principal operations are made on the cadaver, and experimental work, in the seminary, will receive careful attention in the Senior year. Examinations are held in each class at the close of the year.*

The books recommended are: In the Freshman year, Sargent's or Martin's Minor Surgery. In the Sophomore and Junior years, Gilchrist's Syllabus, and Hamilton on Fractures and Dislocations. In the Senior year, Fisher and Macdonald's Text-book of Surgery, and Gilchrist's Surgical Pathology, White and Martin's Genito-urinary Diseases, Adams' Text-Book.

* Sophomores, Juniors, and Seniors are required to attend the clinics; Seniors are admitted to sub-clinics as detailed in sections.

Gynecology.

This branch is divided between the chairs of obstetrics and surgery. The study is pursued in the Senior year.

Medical diseases of women are considered by the chair of obstetrics during the last half of the term. The surgical diseases are treated during the year by the chair of surgery, by lectures, clinics, and demonstrations. The books recommended are Wood's Gynecology, Southwick's Practical Gynecology.

Obstetrics.

This branch is taught in the Junior and Senior years. The plan of instruction in this branch will be the usual didactic method supplemented by demonstrations with wet and dry preparations, models and diagrams, together with clinical practice whenever possible. Two lectures a week are given, with occasional quizzes and recitations. The scheme is designed to carry the student forward, after thorough instruction in the anatomy of the pelvis and generative apparatus, through ovulation, menstruation, gestation, and normal labor. Use of the various instruments is taught on the manikin, and every care taken to thoroughly prepare the students for dealing with complications. Dystochia, and all forms of abnormal gestation and labor are given in the closing portion of the course. The central idea is to give the practical preference over the merely theoretical, The text-books recommended are: Guernsey, Leavitt, and Lusk; Grandin and Jarmen, Obstetric Surgery.

Pathology.

The west hall on the second floor of the Medical building is now the pathological and bacteriological laboratory. Here are all the instruments necessary for the study and demonstration of pathological anatomy and patholgical histology, also the apparatus usually found in a well equipped bacteriological laboratory, ample for the cultivation and demonstration of the germs of interest to medical men. Students not only see this work done, but make all the ordinary cultivations and pure cultures themselves, and prepare slides of all the ordinary non-pathogenic and pathogenic microbes.

Three hours a week are devoted to the practical study of morbid anatomy. The work consists of laboratory exercises, the aim being to make this study as practical as possible, and to familiarize the student with the use of the microscope in diagnosis. Part of the time in the laboratory is devoted to the study of prepared specimens under the guidance of the instructor, and the remainder to the mounting of pathological specimens by the student himself. An abundance of material is furnished by the laboratory, and each student is allowed to keep as his own property all the sections prepared by him during the term. Special attention is paid to the diagnosis of tumors, trichinæ, etc., microscopically, and the student learns easy and rapid methods of making preparations for such diagnosis, Two hours a week are used for lectures, supplementary as well as introductory to the laboratory work.

The course in this chair is pursued in the Junior and Senior years, the Senior year being laboratory work.

The text-books recommended are: Green, Dellafield and Pruden, or Ziegler. In bacteriology, Abbott, Crookshank, or Sternberg.

Medical Jurisprudence, Insanity and Dentistry

will be treated in short courses of lectures, given by appointment.

Classes in materia medica, practice, minor surgery, pharmacology, obstetrics, surgical emergencies, surgery, gynecology, eye and ear, and pædology are in the lecture room or amphitheater of the Homœopathic Hospital, in which rooms also, all the clinics are held. Physiology, anatomy, and insanity are taught in the amphitheater of the Medical Department. Pathology, histology, chemistry, and toxicology are taught in the appropriate laboratories. Medical jurisprudence is taught in the lecture-room of the Law Department.

Clinics.

The clinics of this Department are open to students of all the classes, but the attendance is not obligatory in the Freshman year. All the clinics are full, in some of them the capacity of the hospital has been

severely taxed. The general arrangements and clinical system are as follows: The House Surgeon at the commencement of the term details three students from the Senior class as clinical assistants. One of these retires after one week's service, one after two weeks, and the remaining one after three weeks. One student a week is detailed thereafter so that each Senior student has three consecutive weeks of clinical work. The duties are to assist at all clinics, and attend to all dressings in the Hospital, under the supervision of the House Surgeon. This gives unusual facilities for practical instruction. In the medical and eye and ear clinics each member of the Senior class will be given repeated opportunities for examination of patients, and will be required to diagnose the disease and suggest method of treatment. The clinics are largely patronized, the number of cases and the variety being fully equal to the college clinics elsewhere. The clinics are held as follows:

Medical Clinic. Thursday afternoon, service of Professor DICKINSON.

Surgical Clinic. Saturday morning, service of Professor GILCHRIST.

Eye and Ear Clinic. Tuesday afternoon, service of Professor NEWBERRY.

Gynecological Clinic. Friday afternoon, service of Professor GILCHRIST.

Obstetrical Clinic. By appointment, service of Professor COGSWELL.

Sub-Clinics. The sub-clinics are held two or more times a week, to which sections of the Senior class are admitted, where opportunity is afforded all to make examinations in gynecological cases, and the use of various instruments of precision for purposes of diagnosis.

Medical and surgical treatment, and nursing are free for patients entering the general clinics. Board in the Hospital is furnished for $7.00 a week.

Correspondence with reference to admission to the clinics or Hospital should be had with the professor having charge of the particular clinic, or the Registrar of the Faculty. Arrangements can be made for the reception of a limited number of obstetrical cases, only between the 15th of September and the 15th of February.

Dispensary. In connection with the clinics a dispensary has recently been opened, where the clinical assistants, under the direction of the Faculty, prescribe for and visit out-patients, as well as attend such cases of obstetrics as apply. The dispensary is growing in patronage and influence, and has become a highly important and profitable portion of the work, affording at once material for the clinics, and giving practical instruction to the attendant.

TRAINING SCHOOL FOR NURSES.

A training school for nurses has been authorized by the Board of Regents, the complete course covering three years. The first year is devoted to preliminary studies fitting the pupil for the active work, that is, as nurses in the hospital. Candidates for admission to the Training School must be not under twenty nor over thirty-five years of age, must have a common school education, and must present two letters of recommendation as to their capability, qualifications, and moral character. No other examination for admission will be required.

The *first year* covering the preliminary work begins and closes with the medical term of the University. A fee of five dollars will be charged, payable at the beginning of the term to the Registrar of the Faculty. The work of this year is entirely theoretical, consisting of lectures upon anatomy, physiology, special nursing in diseases of the eye, ear, nose, and throat, and on practical nursing. For cases of emergency and home nursing, this course is especially desirable. Aside from their practical work, during the *second year*, the nurses will have one recitation each week, and during the *third year* special topics for essays will be assigned. Those who have completed the preliminary work at the beginning of the second year will be entered upon one month's probation in the Hospital, during which time they will receive board, lodging, and laundry, but no compensation. If they are found satisfactory, they shall at the end of the first month and during the remainder of the second year in addition to their living as above, receive $8 a month for personal expenses, with a slight increase during the third year. This sum is not to be regarded as wages, the instruction given being in itself full compensation for all services rendered. Those who complete the three years' course shall receive a suitable diploma,

signed by the President and the Secretary of the University and attested by the seal of the University. The graduating exercises occur in connection with those of the Department. For further information address the Matron, ADELE P. KIMBALL, M. D.

Board and Accomodations.

Good board can be obtained at from $3 to $5 a week. By associating in clubs, students may supply themselves with good accommodations at a material reduction from the customary prices.

Students will be furnished with all necessary iuformation concerning rooms and boarding by applying to the Y. M. C. A. Information Bureau.

Requirements for Graduation.

To be admitted to the degree of Doctor of Medicine (M. D.) in this Department, the student must exhibit to the Dean evidence of having pursued the study of medicine for four years; must have attended four courses of lectures, of at least six months each, the last of which shall have been in this institution; and must be not less than twenty-one years of age.

Arrangements have recently been made with the Faculty of the Collegiate Department by which it will be possible for a student to complete the course in Science and the course in the Homœopathic Medical Department in six years, thereby obtaining the degrees of B. S. and M. D. This combined course is especially recommended to all students who intend to enter the profession of medicine.

Alumni Association.

The Alumni Association held its tenth annaul meeting at the College building, March 14, 1897, at which time the following officers were elected:

President—DR. R. W. HOMAN.
First Vice-President—DR. CLARA M. HAZARD.
Second Vice-President—DR. ADELE P. KIMBALL,
Secretary—DR. R. E. PECK.
Treasurer—DR. LEORA JOHNSON.

Executive Committee—PRESIDENT, SECRETARY AND TREASURER.

Alumni are urged to send their names to the Secretary, to be enrolled as members. A small admission fee is required, the funds so procured to be donoted to the Hospital agreeably to a vote taken at the last meeting. Alumni are requested to keep the Secretary informed of change of address.

Johnson County Homœopathic Medical Society.

The meetings of this Society are held weekly in the lecture-room of the Department, and have been very useful adjuncts to the instruction given. Senior students are associate members, and enjoy all the privileges of membership, except that of voting and the right to hold office. Officers for 1897–98:

President—JAMES G. GILCHRIST, A. M., M. D.

Vice-President—R. W. HOMAN, M. D.

Secretary—ADELE P. KIMBALL, M. D.

Any further information may be obtained by addressing the President of the University, the Dean or Registrar of the Faculty, at Iowa City, Iowa.

Dental Department.

Faculty.

CHARLES ASHMEAD SCHAEFFER, A. M., PH. D., LL. D.,
President and Dean of the Dental Department.

F. T. BREENE, M. D., D. D. S.,
Professor of Operative Dentistry and Therapeutics, and Superintendent of Operative Clinic.

WM. S. HOSFORD, A. B., D. D. S.,
Professor of Prosthetic Dentistry and Crown and Bridge Work, Superintendent of Prosthetic Clinics, and Secretary of the Faculty.

Other Instructors.

W. H. DEFORD, A. M., M. D., D. D. S.,
Professor of Oral Pathology and Hygiene.

ELBERT WILLIAM ROCKWOOD, A. M., M. D.,
Professor of Chemistry and Metallurgy.

WALTER LAWRENCE BIERRING, M. D.,
Professor of Pathology, Bacteriology, and Histology.

CHARLES SUMNER CHASE, A. M., M. D.,
Professor of Materia Medica and Therapeutics

JAMES RENWICK GUTHRIE, M. D.,
Professor of Physiology.

JOHN WALTER HARRIMAN, M. D.,
Professor of Anatomy.

WILLIAM ROBERT WHITEIS, M. S., M. D.,
Assistant Professor of Histology.

J. E. FLEENER, D. D. S.,
Lecturer on Orthodontia.

CHARLES CLEVELAND NUTTING, A. M.,
Lecturer on Comparative Odontography.

R. W. BALDWIN, D. D. S.,
Lecturer on Regional Anatomy.

A. E. ROGERS, D. D. S.,
Lecturer on Dental Anatomy.

W. G. CLARK, D. D. S.,
Demonstrator of Porcelain Work.

J. P. MULLIN, M. D.,
Demonstrator of Anatomy.

R. W. BALDWIN, D. D. S.,
Demonstrator of Dental Technology.

A. E. ROGERS, D. D. S.,
Demonstrator of Dental Technology.

G. W. ESHLEMAN, D. D. S.,
Demonstrator of Dental Technology.

C. B. LEWIS, D. D. S.,
Demonstrator of Dental Technology.

F. B. JAMES, D. D. S.,
Demonstrator of Dental Technology.

E. A. SPRAKER,
Custodian.

HELEN BASCHNAGEL,
Clerk.

DENTAL DEPARTMENT.

Instruction in this school is given throughout the academic year by lectures, recitations, clinical teaching, and practical exercises, uniformal distributed. The course of instruction is progressive and extends over three years.

Some of the studies of the first and second years are pursued in connection with the classes in the Medical Department, the student receiving instruction by the same professors,at the same time and place with the medical students, and at the end of the year passing with them the examinations.

It is the object of the Faculty to present a complete course of instruction in theory and practice of Dentistry; and for this purpose well-appointed laboratories and infirmaries are provided, and such arrangements made as insure an ample supply of patients. Clinical instruction is given by the professors and other instructors, and under the direction of demonstrators patients are assigned to the students, insuring to all opportunity of operating at the chair, and becoming by actual practice familiar with all the operations demanded of the dentist.

The infirmaries remain open and clinical instructors and demonstrators are in attendance daily throughout the school year, offering to students unsurpassed facilities for acquiring practical knowledge and manipulative dexterity.

Course of Instruction.

The course of instruction extends over three years of nine months each. This, however, does not apply to those students who entered before the year 1896–97.

Requirements for Admission.

The applicant must present to the Faculty satisfactory evidence of good moral character, and must pass a preliminary examination or present a diploma or a certificate of graduation from a college, academy or high school, or a first class teachers' certificate covering the branches enumerated below under Preliminary Examination. Students of both sexes are admitted on equal terms and are afforded the same facilities for acquiring a thorough dental education.

Preliminary Examinations. All students who intend to matriculate in the College are expected to be present at the time appointed for examination. The preliminary examination will begin on Tuesday, the day preceding the opening of the session, at 8 A. M., and will embrace the following branches: Algebra, through quadratics, three terms; rhetoric and composition, three terms; natural philosophy, three terms; United States history, three terms; English literature, three terms; Latin, three terms.

The student may, at the option of the Faculty, substitute any one of the following electives in lieu of one of the preceding studies. No substitute, however, will be allowed for Latin: Three terms of algebra, through quadratics; three terms of geometry, plane and solid; two terms of physiology; two terms of physical geography; one term of botany, with analysis of forty plants; three terms of general history; three terms physics; three terms of English literature; two terms of civil government; two terms of history of England; three terms of American literature; three terms of chemistry; one term of commercial arithmetic; two terms of astronomy; two terms of geology; two terms of natural history; one term of political science; two terms of drawing; three terms of German; three terms of Greek; three terms of Latin reading, Cæsar; three terms of Cicero, four orations; three terms of Vergil, six books; one term of book-keeping; three terms of French; three terms of manual training.

Schedule of Studies.

First or Freshman Year. Completed the first year: Chemistry, including Laboratory, Materia Medica, Histology, including Laboratory work. Comparative Anatomy, with Dissection, Dental Anatomy with Technic, and Operative Technic.

Subjects taken first year and continued through the second year: Anatomy, Physiology, Dental Technology, lectures and laboratory work, and Operative Technic.

Second or Junior Year. Subjects completed the second year: Anatomy with Dissection, Physiology, Organic Chemistry, and Metallurgy, including laboratory, Therapeutics, Dental Technology, and laboratory work.

Subjects taken the second and continued through the third year: Surgery, Pathology, Therapeutics, Orthodontia Technic, Operative Technic, Operative Dentistry, and Prosthetic Dentistry.

Third or Senior Year. Subjects completed the third year: Oral Surgery, Pathology, Regional Anatomy, Special Histology, Clinical Dentistry, Therapeutics, Metallurgy and laboratory work, Dental Art, Special Therapeutics, Practical Bacteriology, Operative Dentistry, Prosthetic Dentistry, Dental Pathology, and Hygiene.

All students of the first and second years will be required to pass an examination on the studies pursued in their respective courses before leaving the University at the close of each term. No student who has failed in two of the studies of his course will pass to advanced standing unless they are made up before the holiday vacation. No certificates are given to any who fail in more than two branches, except a time certificate stating the actual time of attendance.

COURSE OF LECTURES AND LABORATORY WORK.

Operative Dentistry and Therapeutics.

To arrest decay and prevent the destruction of human teeth is the ideal work of operative dentistry. To know how to fill teeth well and lastingly is the ambitious desire of every intelligent student of dentistry. In the lectures delivered on this subject he will be made acquainted with all the useful materials and methods of filling teeth, the use of instruments, and the various manipulations required in a full practice at the operating chair. The same will be fully illustrated and demonstrated by numerous clinics, which will constitute an

important feature of the dental instruction. The student is expected to supply himself with such instruments as will enable him to perform all the usual operations of dentistry, under the supervision of the demonstrators. Students who own a dental engine should bring it with them. The application of remedies to diseased conditions is taught practically every day upon the patients in the operative clinics.

Clinical Dentistry.

In clinical dentistry thorough practical instruction will be given in the details of operations, use of materials, instruments, appliances and the application of remedial agents for the restoration of diseased conditions. The students are required to take charge of patients and perform operations under the supervision of demonstrators. The large number of clinical patients presenting themselves furnishes ample opportunity for a variety of practical work,

Prosthetic Dentistry.

The instruction in this department is both didactic and practical. It is the aim to teach not only the mere mechanical processes of Dentistry, but that combination of art with mechanism which enables the practitioner to effect so much in restoring the symmetry of the face and usefulness of the teeth where they have been lost or impaired by accident or disease. Thorough instruction is also given in methods of restoring the dental organs with crowns of metal, or porcelain, by bridges, and by the making of artificial dentures with bases of metal, rubber, celluloid, aluminum, gold and porcelain, either alone or in combination.

General Pathology and Bacteriology.

Pathology and bacteriology will be taught during the Junior and Senior years by means of lectures and laboratory work. The work in the Junior year will be devoted to general pathology, comprising a study of the general pathological changes, such as circulatory disturbances, degenerations, and inflammations. that occur in human tissues. During the Senior year the work will consist of special pathology and bacteriology. It will include the study of all forms of new growths

and the disease changes occurring in special structures, especially the oral tissues and such changes as come within the sphere of dental surgery.

The bacteriological laboratory is equipped with the most improved apparatus for bacteriological investigation. The work will comprise the study of the characteristics of micro-organisms and their cultivation; special consideration being given to the micro-organisms of the buccal cavity and their relation to dental caries and other disease processes. The slides prepared become the property of the student.

Histology.

Histology will be taught during the Freshman and Junior years by means of lectures and laboratory work. The laboratory work will comprise the preparing and study of microscopical slides, showing the minute structure of the different tissues and organs of the human body, with special reference to the digestive apparatus. Instruction will be given in the various methods of preparing and staining tissues for microscopical examination, the slides prepared becoming the personal property of the student. During the Junior year the work will be continued in the form of special dental histology, which will be presented by means of didactic lectures and laboratory work. In the laboratory, each student will prepare and study a collection of slides pertaining to the histology of all the dental tissues and softer structures of the buccal cavity, including a complete series showing the development of the teeth, the slides becoming the property of the student.

Oral Pathology.

A brief consideration of inflammation and its terminations, pathological conditions incident to first dentition, pathological conditions incident to second dentition, dental caries—various theories and experiments by which conclusions are reached, individual diseases of the teeth,—sensative dentine, hyperæmia, congestion and inflammation of the teeth, pulp nodules, putrescent pulps, alveolar abscess, acute and chronic, diseases of the peridental membrane, perecementitis, gingivitis, pyorrhœa alveolaris, the tongue and the mouth in diseases of remote parts, of tumors, methods of diagnosis. The epulic

tumors, osteoma, simple cystic tumors, dentigerous cysts, diseases of the antrum, ranula, mouth breathing, alveolar necrosis, maxillary necrosis, phosphor-necrosis, epitheleoma, syphilis, mouth manifestations, especially neuralgia and many other practical subjects that can not be mentioned here.

Hygiene.

The importance of this subject cannot be overestimated when it is understood that decay of the teeth, suppuration of the pulp, alveolar dental abscess, pyorrhœa alveolaris, and perhaps other diseases with which dentists have to contend are the direct result of unhygienic conditions in the oral cavities. The processes of fermentation, suppuration, and infection in general, will be considered, and full instruction given in oral, personal, and office hygiene, and in the best methods of disinfection and antisepsis, including the care of the instruments in daily use.

Chemistry.

The work in chemistry is carried on during two years. In the Freshman year the lectures treat first of the general principles of the science, then their application to the needs and operations of dentistry are explained. The laboratory work of this year is chiefly in qualitative analysis with a view to familiarizing the student with the action of reagents, with chemical manipulation and with the most important properties of the metals and their compounds. In the Junior year the lectures will be upon organic chemistry and metallurgy, and the laboratory work upon the properties of the metals, and also some of the more important methods of quantitative analysis.

Materia Medica and Therapeutics.

The course in these branches will cover the following points:

1. The Freshman class will be given during two-thirds of the session two hours a week upon both organic and inorganic drugs, special stress being laid upon those appertaining chiefly to dentistry. Among such drugs may be mentioned anæsthetics, general and local; coagulants, mineral and vegetable; pain obtunders, sedatives, narcotics, etc. Also such drugs as are comprised in the list of antiseptics, disinfectants, germicides, deodorants, epispastics, eschorotics, etc.

2. The Junior class will be given a course in general therapeutics with the same thought constantly in mind of emphasizing those drugs that appertain chiefly to the practice of dentistry.

Throughout the session both classes will be quizzed frequently to test their knowledge of the subjects presented, and the Freshmen will be given a complete course in prescription writing, inclusive of the subject of incompatability.

Anatomy.

This is taught in the first and second years by lectures and recitations, one course in dissection being taken each year.

Physiology.

In this department the inductive method is very largely employed in imparting instruction. The lectures are illustrated by means of charts, diagrams, and blackboard figures, and the student is rendered practically familiar with the phenomena of the most important bodily functions of normal operation by the employment of experiments upon living animals as a means of demonstration.

Orthodontia.

Instruction in this branch will be by the use of large charts demonstrating appliances of practical cases together with special care as to preventive measures for the care of deciduous teeth, and corrective treatment during the eruption of the permanent teeth. The course will also consist of the treatment of practical cases in the infirmary, the care of which will be given to individual students, under the direction of demonstrators in charge, and will also be used for class instructions.

Regional Anatomy.

The instruction on this subject will be supplementary to the lectures on general anatomy, and will include a careful description of the bones, muscles, blood vessels, and nerves of the head and face, especially such as are intimately associated with the physiology and pathology of the dental organs. The lectures will be illustrated by maps, charts, and models, and by several well prepared natural specimens of the head, jaws, teeth, and nerves *in situ*.

Comparative Odontography.

This course will be one of unusual practical value. The dental organs and their practical use, comprised in the various orders or families of the animal kingdom, will be illustrated by natural specimens, lantern exhibitions, and dessection of the lower mammals.

Dissection.

Students will, early in the term, make application to the demonstrator of anatomy for places at the dissecting table. Each student will be required to dissect at least one part. No charge is made for material.

Dental Anatomy.

This course is supplementary to the subject of general anatomy and in addition to the lectures given, each student will prepare a series of sections of the natural teeth, making the prints of same in a book for that purpose. The books are the property of the students.

Porcelain Work.

The use of porcelain in the various applications to the practice of dentistry including crowns, bridges, artificial dentures, inlays, etc. Also the use of the various furnaces will be demonstrated.

Operative and Prosthetic Technic.

This course consists of the tempering and making of instruments both for operative and prosthetic work, also the preparation of cavities in the natural teeth out of the mouth and filling of the same with the different filling materials. The course is thoroughly practical and constitutes a very important feature of the student's work preparatory to the clinical experience.

It is the desire of the Faculty that the dental profession will assist in the above course by forwarding to the department all the extracted teeth possible, express charges paid by the department.

Museum and Library.

Members of the dental profession, dental students, and all persons interested, are invited to contribute to the museum such specimens of

malformation, normal or diseased conditions, as will serve for illustration of dental teaching; also to the library any books, pamphlets, journals, or other reading matter pertaining to dental subjects. Such contributions will be duly labeled with the donor's name, and carefully preserved.

Laboratories and Clinic Rooms.

The didactic work is supplemented by practical teaching in the laboratory and clinic rooms; with an abundance of patients (5,226 last session). The clinic rooms are equipped fully and completely, with Wilkeson and Columbian chairs, cabinets, and all necessary apparatus for the purpose, such as lathes, furnaces for porcelain work, rolling mills, vulcanizers, tables, microscopes, etc. Students are required to supply only the lighter and more portable instruments, the list of which will be furnished on application.

Requirements for Graduation for Session of 1897-98.

The candidate for graduation must be of legal age, and of good moral character; must present to the Faculty and Board of Examiners a satisfactory case of artificial dentistry; also a good clinical record of practical operations on the natural teeth; must sustain a satisfactory examination in the branches taught, and must prove his fitness for the practice of dentistry.

The time of study must include attendance on three courses of lectures, the last of which must be at this institution.

The deportment during the term must have been unexceptionable; and attendance upon all lectures, clinics and other instruction in the course must have been in accord with the requirements of the department.

Members of the Junior class must be examined finally in anatomy, physiology, organic chemistry, metallurgy and therapeutics.

Members of the Senior class must notify the Dean of the Faculty in writing during the second week of February of their intention of becoming applicants for the degree of Doctor of Dental Surgery, at the same time presenting a certificate from the Secretary of having paid all fees, with a certificate of legal age and good moral character.

Attendance on any course of lectures in other reputable dental colleges having similar requirements will be accepted as equivalent to a corresponding course in this department. Graduates of medical colleges will be required to attend two full years of instruction in practical dentistry in this institution, including the courses of lectures, before applying for graduation.

Having complied with the requirements of this department, the Faculty and Board of Examiners will recommend the candidate to the Board of Regents as entitled to receive the degree of Doctor of Dental Surgery.

Tuition.

The fee for tuition is $75 for each year, payable $50 on or before October 1, and $25 on or before January 10. There are no extra fees whatever, but a deposit of $3 must be made to cover breakage and loss before beginning work in the chemical laboratory.

The above statement of the fees is now in effect, and will be understood to apply to all students in the departments, entirely irrespective of the date of matriculation. All students who do not pay the proper fees or avail themselves of the provision above mentioned will be suspended from the department until such fees are paid.

It is of greater advantage to the student, during his collegiate course to study and review a single text-book in each department than to read several cursorily. It is, therefore, advised that a single work in each department recommended below be chosen and carefully studied, while any others may be used for reference and subsequent perusal.

PRACTITIONER'S COURSE.

This course is planned for the convenience and benefit of practitioners. It will be optional with those entering the course as to what studies they will pursue, and what methods in practical work they may take up.

The curriculum will be arranged more especially to give a thorough course in pulp and abscess treatment, and other pathological conditions of the oral cavity. In addition to this, detailed instruction will

be given in bridge and crown work, continuous gum dentures, porcelain fillings, and in the methods of working metals by all the different operations which the practitioner is called upon to perform.

Requirements for Admission.

Anyone in reputable practice may enter this course. Those attending the full course of two months will be given a Practitioner's Certificate at the end of the course. Graduates of this department will be admitted on the payment of the matriculation fee only.

Graduates of other reputable dental schools will be admitted on payment of the matriculation fee and $10.

A full corps of demonstrators in all departments have been appointed to attend to the duties pertaining thereto. The service of several additional clinical instructors will be obtained during the session, each one a specialist.

Fees for Practitioner's Course.

Matriculation fee	$ 5 00
Tickets, including certificates	25 00
Laboratory fee	6 00
	$36 00

All fees must be paid at the beginning of the session to the Secretary of the University, William J. Haddock.

Board, per week	$3 00 to $5 00
Board in clubs, per week	1 50 to 3 00
Unfurnished rooms, per month	2 00 to 4 00

Students should make their arrangements to be in attendance on the first day of the session, as the Faculty cannot adjust their plans to the tardy arrival of students by wasting time on unimportant lectures at the beginning. Promptness at the beginning of the term is very essential.

TEXT-BOOKS, AND BOOKS OF REFERENCE.

These can be obtained at the book stores in Iowa City. Dealers give a discount of from ten to twenty per cent. The following are recommended by the Faculty:

Operative Dentistry: American Text-book of Operative Dentistry, Ottellungui, Flagg's Plastics.

Prosthetic Dentistry: Essig's Prosthetic Dentistry, Richardson's Mechanical Dentistry, Evan's Artificial Crown and Bridge Work; collateral reading of Harris's Principle and Practice, American System of Dentistry.

General Pathology: Green, Zeigler, Delafield, Prudden.

Bacteriology: Abbott, Crookshank, Frænkel.

Histology: Piersol, Schæfer, Sterling, Klein.

Oral Pathology and Hygiene: Greene, Garretson's Oral Surgery, Wilson on Hygiene.

Chemistry: General Chemistry—Wurtz, Bloxam, Witthous; Qualitative Analysis—Thorpe, Crafts.

Materia Medica: White and Wilcox, Potter.

Therapeutics: H. C. Wood, Potter, Gorgas.

Anatomy: Gray (13th edition), Holden's Landmarks, Quain (10th edition), Holden's Oeteology, McClellan's Regional Anatomy, Treve's Applied Anatomy.

Physiology: Foster, Landois, and Sterling, Flint, Kirk.

Orthodontia: Angles, Guilford.

Dental Anatomy: Tomes, Black.

Comparative Anatomy: Howell.

Dictionaries: Harris, Dunglison, Thomas.

Notice.

The National Association of Dental Faculties, of which this department is a member, passed at their last meeting a rule whereby all students not regularly matriculated within ten days from the opening of any school will not receive credit for a full course.

The Dental department of the State University of Iowa not only complies with the rules and conditions of the National Association of Dental Faculties but also those of the National Association of Dental Examiners.

Members of the profession who receive the announcement are requested to notify the Secretary of any change in their address. They will also confer a favor by sending the names of other dentists practicing in the towns in which they reside. For further information apply to Wm. S. Hosford, D. D. S., Secretary, Iowa City, Iowa.

Department of Pharmacy.

Faculty.

CHARLES A. SCHAEFFER, A. M., PH. D., LL. D.,
President.

EMIL L. BOERNER, PH. G., PHAR. D.,
Professor of Pharmacy, Director of the Pharmaceutical Laboratory, and Dean of the Faculty.

LAUNCELOT ANDREWS, PH. D.,
Professor of Chemistry, and Director of the Chemical Laboratory.

THOMAS H. MACBRIDE, A. M.,
Professor of Pharmacognosy, and Director of Microscopical Laboratory.

CHARLES S. CHASE, A. M., M. D.,
Professor of Materia Medica.

BOHUMIL SHIMEK, C. E.,
Professor of Botany.

E. W. ROCKWOOD, A. M., M. D.,
Lecturer on Toxicology.

CARL L. ENDE, M. S.,
Instructor in Chemistry.

LESTER T. JACKSON, B. S.,
Assistant in Chemical Laboratory.

LULA BEALL JESTER, PH. G.,
Assistant in Pharmaceutical Laboratory.

GEORGIA KNAPP, PH. G.,
Assistant in Pharmaceutical Laboratory.

DEPARTMENT OF PHARMACY.

The Department of Pharmacy of the State University of Iowa is designed to furnish pharmacists, and those desiring to engage in pharmacy, an opportunity to acquire a thorough practical education in the departments of science most intimately connected with the practice of that profession. A technical education, such as that offered by the schools of pharmacy, and seldom if ever acquired in drug stores, is as necessary to the accomplished pharmacist as is the special training of a medical course to the physician. The day is not far distant when the pharmacist who is not provided with the evidence of skill which the college diploma furnishes, will labor under equal disadvantages with the non-graduated physician of to-day.

The experience of the past twelve years has thoroughly demonstrated the practicability of the courses in this Department. This is shown by the readiness with which students of even one session find and hold employment in drug stores, at salaries much higher than they could possibly command without the college training, and by the fact that the State Board of Pharmacy admit to their examinations, as candidates for registration, students who have completed one year's work in this school. A much larger percentage of students pass these examinations than of candidates who go before the Board from drug stores, even after several years' experience.

Incidentally, therefore, the courses are well calculated to aid those who desire specially to qualify for the examinations of the State Board of Pharmacy.

The thirteenth annual course of lectures will begin on Wednesday, September 16th, 1897, and close on Wednesday, March 30th, 1898. There will be a vacation commencing December 19th, 1897, and ending January 3rd, 1898.

Building.

This school is now comfortably located in a new three-story building, especially erected at a cost of about fifty thousand dollars, and furnishing about twenty-five thousand square feet of floor space, perhaps the largest accommodations in the way of room enjoyed by any school of pharmacy in this country. The equipment of this building is of the most modern, and in keeping with the advancing stage of the science. Through liberal appropriations periodically made by the Legislature and the Board of Regents, the accumulated equipment of some years is being rapidly enlarged, and affords excellent facilities for instruction. The lecture-rooms are provided with all desirable conveniences for class demonstration, and with large tablet chairs. The laboratories are especially roomy, the chemical and pharmaceutical laboratories occupying each a floor space of 54x140 feet, divided into two large general and a number of smaller special laboratories. Two forty-horse power boilers supply the steam for all purposes, and a seven-horse power gas engine furnishes the power for drug mill, dynamo, etc.

Preliminary Examination.

Every applicant for admission to the Junior class will be required to pass a preliminary examination in English, penmanship, geography, and arithmetic, or give satisfactory evidence of having completed such studies in a grammar school.

Admission to the Senior class will be by examination in the branches of study taught during the Junior year. Students presenting evidence of having passed the Junior examination in another recognized college of pharmacy will be admitted without further examination.

The Courses of Instruction

embrace lectures on pharmacy, materia medica, pharmacognosy, botany, chemistry, and toxicology, with practical work in pharmaceutical, microscopical, and chemical laboratories, and almost daily recitations during the term.

About two hundred and twenty-five lectures are delivered annually

to the Junior class, and more than four hundred hours are devoted to practical work in the several laboratories, and to recitations.

Following the wise precedent established a few years ago by some of the leading colleges of pharmacy, the graded course has been adopted. The full course will extend over two years, and the students will be divided into Junior and Senior classes, composed of first and second course students, respectively. This arrangement, while adding greatly to the labors of the Faculty, will prove of great benefit to students, by enabling the Professors not only to introduce new and profitable subjects in their departments, but by extending their lectures over two sessions, to take up the elementary work during the first, and the more advanced during the second year.

PHARMACY.

PROFESSOR BOERNER.

The introductory lectures to the Junior class will embrace a short review of the pharmacopœias of the United States, England, France, and Germany; the various systems and appliances of weights and measures in use by the leading nations; the apparatus and methods necessary for the determination of the specific gravity of solids and liquids, and the sources and management of heat for pharmaceutical purposes. These will be followed by descriptions and illustrations of apparatus necessary to properly conduct the processes of percolation, filtration, comminution, sifting, solution, precipitation, neutralization, evaporation, distillation, sublimation, etc.

The official drugs will be considered by groups, the classification being based upon the more prominent proximate constituents contained in the drugs under consideration, beginning with those substances containing prominently lignin, and passing in order to those containing starches, sugars, gums, resins, oleo-resins, fixed oils, volatile oils, alkaloids, glucosides, neutral principles, etc.

All the preparations of a drug will be considered together. To aid the student in memorizing the strength of official preparations, these will be considered by pharmacopœial classifications.

The lectures to the Senior class will begin with a short review of the subjects embraced in the Junior course, followed by a critical study of the preparations of the United States Pharmacopœia, classified according to the character of their active or medicinal constituents. The relation they sustain to different menstrua, and to each other will be considered, and whenever practicable, the method of their preparation will be demonstrated, the aim being to apply the theories and general principles taught in the Junior course.

The concluding lectures of the course will be devoted to extemporaneous pharmacy—such as the preparation of emulsions, pills, suppositories, solutions, ointments, etc., and the dispensing of physicians' prescriptions.

The adulteration and sophistication to which official preparations are subject, and the methods for their detection will be noticed to the extent which their importance may demand.

CHEMISTRY.

PROFESSOR ANDREWS.

The laboratory work will be divided into two distinct courses, both of which are requisite for graduation, but only one of which can be taken by the student during either of the two college years.

The Junior Year

comprises instruction in the general principles of chemistry, and in qualitative analysis, arranged with special reference to pharmaceutical preparations.

The lectures elucidate the fundamental laws of the science, demonstrating them, whenever possible, by numerous experiments performed before the class. The chief metallic and non-metallic elements, with their more important compounds and reactions are considered. The practical application of the principles of chemical calculation, by which the composition of compounds may be deduced from their formulas, in consequence of its great importance to the pharmacist, is carefully inculcated. Instruction in details of the work, and in mat-

ters of manipulation is conveyed in the laboratory course, which occupies, on an average, seven hours a week. Here the student is taught by a systematically arranged series of experiments the properties of the commonest chemical agents, and how to handle chemical apparatus properly. When some manipulative skill is attained, qualitative analysis is taken up. The characteristic reactions of bodies as applied to their detection in mixtures are made familiar in a series of examples, beginning with the simplest substances, and passing gradually to the more complex, such as are met with in the practice of Pharmacy. The student is expected at the conclusion of this course to be able to test the purity of official preparations and to detect the nature of any adulteration which may be present. He is required to pass a practical examination covering this ground.

The Senior Year.

Quantitative analysis is taken up, particular emphasis being laid upon volumetric processes, as these, by virtue of the ease and rapidity with which they are executed, are of the greatest general usefulness.

Practice is given in the valuation of numerous inorganic and organic pharmaceutical preparations, and in the methods of controlling or determining their exact strength. A practical examination concludes the course.

BOTANY AND PHARMACOGNOSY.

PROFESSORS MACBRIDE AND SHIMEK.

In these subjects three courses are offered, two in botany and two in pharmacognosy:

Course 1. General Botany. The first part of the course is devoted to a careful study of the elements of the science. The various organs of the plant are reviewed and the local autumnal flora is made to afford abundant material to illustrate, in the hands of the student, the morphology of roots, stems, and leaves, as well as the ordinary principles of floral analysis, and the means of specific identification.

Fall. Two hours a day for the first six weeks. Professor SHIMEK.

Course 2. The second course is devoted to an inquiry into the life and growth of the plant; the cell, its morphology and products; the morphology of the entire plant structure as a means of identification. These and similar topics are made the basis of a course of lectures illustrated by means of the microscope and stereopticon.

Fall. One hour a week, latter half. Professor SHIMEK.

Course 3. Pharmacognosy. This course is intended to present the organic Materia Medica from the standpoint of the biologist, with a view to enabling the student to handle his material intelligently, and to identify them in accordance with the recognized principles of biologic science. The various drugs of organic origin are taken up in the order of their natural classification, the principal facts as to their nature, origin and preparation are set forth in a series of lectures illustrated by abundant material in original packages, as well as by herbarium specimens (in the case of plants), charts, drawings, microscopic preparations, etc.

Winter. One hour a week, commencing about November 1st. Professor MACBRIDE.

Course 4. Microscopic Technology. This course is intended for Seniors only. It includes instruction in the use of the compound microscope, and its employment in the investigation of vegetable structures. The student is supplied with an instrument and all necessary reagents and apparatus, and is taught the various modes of cutting, staining, and mounting histological preparations. Practical instruction is given in the use of the microscope in the identification of crude drugs as well as in the detection of adulteration. Each student taking this course prepares at the laboratory for his own use, a cabinet of microscopic slides, illustrative of many of the more important official drugs.

Winter. Two hours a week. Professors MACBRIDE and SHIMEK.

In carrying forward the work in botany and pharmacognosy, free use is constantly made of the magnificent collections now found in the Herbarium of the State University. Ample cabinets of Materia Medica are also at hand.

Text-books:

Wood's Class Book of Botany.

Gray's Manual of Botany.

Flueckiger's Principles of Pharmacognosy.
Maisch's Materia Medica.
Bentley and Trimen's Medicinal plants.
Milspaugh's American Medicinal Plants.
The United States Dispensatory.
The National Dispensatory.

MATERIA MEDICA.

PROFESSOR CHASE.

Both the inorganic and organic Materia Medica will be presented to the students of the Junior class by lectures supplemented by careful drill in recitation once each week during the entire session. The professor in charge will also specially present to students in the Department, a careful synthetic and analytic course in prescription writing and interpretation as well. Both the common and metric systems will be employed, in order that the student may be made familiar with the various methods.

The official preparations will be considered in detail, with all necessary allusions to the physiological actions and medicinal uses of the more common and important drugs of the Pharmacopœia.

A special effort will be made to teach the student to familiarize himself with all forms of incompatibility, with a view to detection at sight of improperly written prescriptions. This knowledge, it is believed, is of vital importance to the pharmacist.

The student will also be carefully drilled in dosage, alkaloidal substances, toxicology, antidotes, etc., etc. Tests of proficiency are made from time to time. In a word it is the aim of this chair to make the subject of Materia Medica eminently practical in all its bearings upon the practice of the profession of pharmacy.

TOXICOLOGY.

PROFESSOR ROCKWOOD.

The course consists of one lecture a week during the entire session. The general action of poisons is first considered, then the most important ones are treated separately. Their physical properties and chemical action are noticed, together with their uses, and most common sources as toxicological agents. The symptoms of the different classes are given, and the treatment for each. Especial attention is paid to antidotes. Methods of testing suspicious substances, as well as the examination of secretions and excretions, are explained and illustrated by experiments.

PHARMACEUTICAL LABORATORY.

The pharmaceutical laboratory, provided with the necessary conveniences, apparatus, and material for thorough practical instruction, will be open daily during the greater part of the school year. The instruction will embrace practice in the use of thermometers, hydrometers, specific gravity bottles, and balances; the preparation of tinctures, syrups, oleo-resins, solid and fluid extracts, pill masses, compound powders, solutions, hypodermic and compressed tablets, and many chemicals, such as the official iron solutions, scale salts of iron, mercury and lead compounds, which the apothecary should and can prepare for himself, both with advantage and profit; extemporaneous pharmacy, including the preparation of emulsions, pills, plasters, suppositories, prescriptions, the application of pharmacopœial tests, the manufacture of handkerchief extracts, colognes, sachet powders, etc.; in short, practice in all the varied duties of a first-class pharmacy. The greatly improved facilities of the new laboratory building will permit of the introduction of work found impracticable for preceeding classes.

Instruction in this branch is now looked upon as one of the utmost importance in pharmaceutical education, especially as much of the work formerly conducted entirely by the apothecary is now in the hands

of large manufacturing establishments, and the student in pharmacy is thereby deprived of many valuable opportunities for gaining the necessary experience and self-confidence in drug stores, which a personal acquaintance with the various manipulations is sure to bring about. The instruction in this laboratory will be individual; the progress made will therefore depend upon the student's knowledge and exertions.

All students desiring to graduate in this school are required to pursue this course during the Junior and Senior years.

Students will be furnished with all necessary apparatus and material, but will be required to pay for all breakage or damage to apparatus while in their possession.

Tuition.

The fee for tuition is $75 for each year, of which $50 is payable on or before October 1, and the remainder on or before January 10. There are no extra fees whatever, but for each laboratory course in chemistry or practical pharmacy there is required a deposit of $3.00 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement of fees is now in effect, and will be understood to apply to all students in the Department, entirely irrespective of the date of matriculation.

All fees must be paid to the Secretary of the University, William J. Haddock.

All students who are delinquent in the payment of tuition will be suspended from the Department until the tuition is paid.

Qualifications for Graduation.

Every person upon whom the diploma of this Department is conferred must be of good moral character, have arrived at the age of twenty-one years; have attended two full courses of lectures, the last one of which shall have been in this school, including two full courses

of pharmaceutical, microscopical, and chemical laboratory practice; and shall pass satisfactory written examinations in all the branches taught in this school, when he shall be entitled to the degree of Graduate in Pharmacy (Ph. G.).

Final Examinations.

The examinations of candidates for graduation will take place during the week preceding the close of the lecture season.

Weekly Examinations.

As auxiliary to the lectures, the professors will hold frequent quizzes in their respective departments, to serve as reviews of the subjects discussed in the lectures.

Text-Books.

Pharmacy—For Juniors—U. S. Pharmacopœia, Remington's Practice of Pharmacy, National Formulary. For Seniors—All the above, Caspari's Treatise on Pharmacy, Coblentz' Handbook of Pharmacy, Scoville's Art of Compounding.

Chemistry—Andrews' Qualitative Analysis, Wulling's Inorganic Chemistry; Schimpf's Volumetrice Analysis (for Seniors).

Pharmacognosy—Maisch's Organic Materia Medica.

Materia Medica—White & Wilcox's Materia Medica and Therapeutics, Sayre's Organic Materia Medica and Pharmacognosy, Culbreth's Materia Medica and Pharmacology.

Botany—Gray's or Wood's Manual, Bastin's College Botany.

Reference Books.

U. S. Dispensatory, National Dispensatory, Fresenius' Analytical Chemistry, Hoffman and Power's Examination of Medicinal Chemicals, Gray's Botanical Text-Book, Vol. II.

Board.

The cost of board in clubs is from $1.50 to $2.50 per week; in private houses from $2.50 to $4.00 per week. Rooms can be obtained at from 50 cents to $1.50 per week for each student.

Libraries.

The libraries of the University number in the aggregate about 40,000 volumes. The general library contains 32,000 volumes, and is accessible to students of all departments during eight hours of every week day. Books may also be drawn for outside use.

Nearly seventy American and European periodicals are taken, and are kept upon the tables of the reading room throughout the year.

For further particulars address the Dean, Emil L. Boerner, Iowa City, Iowa.

DEGREES CONFERRED JUNE, 1896.

COLLEGIATE DEPARTMENT.

Master of Arts.

Hollister, Horace A.
Houser, Eva
Kaye, Percy L.
Rockwood, Laura Clarke
Stover, Charles C.
Slotterbec, Clara Agathe
Plum, Harry Grant

Master of Science.

Dean, Lee W.

Bachelor of Arts.

Brock, Frank Victor
Graves, William Allen
Henry, May Virginia
Jackson, Lester T.
Maguire, Marie Ella
Maine, Ernest K.
McCoy, John N.
Van Law, C. H.
Whiting, Samuel Danforth
Zimmerman, M. Amy

Bachelor of Philosophy.

Barrett, Mary Emily
Barton, David Henry
Burling, Charles Glenn
Butler, Maud Bernadetta
Charlton, Ethel
Collson, Mary E.
Currier, Helen Noyes
Davies, Marion
Dewel, William Cornelius
Emry, Roy Logan
Evans, William Thomas
Gardner, Herbert H.
Glass, Eva J.
Harvat, Clara R.

Holson, Lulu Claire
Holt, Harriette Grace
Jones, Ella Jane
Kallenberg, Henry F.
McAlvin, James Gregg
McCarren, James
Otto, Clementine C.
Palmeter, Roy Armstrong
Seerley, Frank N.
Smith, Samuel Craig
Stempel, Carl Hugo
Treimer, Carl
Willis, Eloise
Wilson, Edwin Brown

Bachelor of Science.

Arey, Rodney Melvin
Bartsch, Paul
Bowersox, Eugene Clarence
Cavanagh, Lucy
Clark, Whit H.
Dakin, Channing E.
Rigg, George Burton
Stewart, Helen White
Stover, Roy Walter
Tompkins, Erle Duncan

Bachelor of Science in Civil Engineering.

Gabelman, Fred
Hartman, Russell T.
Newell, George W.
Sears, Joseph H.
Hubbard, Frank Richard

Bachelor of Science in Electrical Engineering.

Koza, Frank Joseph

LAW DEPARTMENT.

Bachelor of Laws.

Aldrich, Charles S., Ph. B.
Allison, William B. Jr., A. B.
Anderson, Oscar C., Ph. B.
Andrews, Walter G.
Arp, Henry A.
Bailey, John F.
Bailey, Ralph F.
Barrett, John W.
Bates, William E.
Bevan, Sargent
Brown, Charles D.
Brown, Clarence J.
Brunn, William H.
Burgess, Albert W.
Busby, Homer E.
Butterfield, Mark J.
Butterfield, William H.
Campbell, William H.
Carpenter, Roy D.
Cohen, M. Harry

Coldren, Clymer A.
Coldren, Stevens A.
Corbett, Edward M., A. B.
Cunningham, Matthew C., A. B.
Curtiss, Fred M.
Cutting, Elmer W.
Dyke, Harry N.
Ehret, Edward E.
Eversmeyer, Fred M.
Fairchild, Timothy M.
Farwell, Frank E.
Feenan, Fred K.
Fitzpatrick, Thomas J.
France, James C.
Gaines, Richard J.
Gallagher, William S., C. E.
Geiser, Mathias E.
Gilmore, Merritt C.
Goodspeed, Bert A.
Granger, Rollo S.
Grant, John
Hagemann, Fred P., Ph. B.
Halpenny, William H.
Hayes, Gordon
Hendershot, Charles L.
Hughes, William H.
Hull, John A., Ph. B.
Hurley, William H.
Ingham, Edward P.
Irving, Samuel C., A. M.
Jones, Clyde R.
Keefe, Harry L., Ph. B.
Kepler, Malvern H., A. B.
Kepler, Richard P., B. S.
Knittle, George B.
Krause, Bernard C.
Larrabee, William, Jr., Ph. B.
Lawrence, Albert L., Ph. B.
Lawrence, George C.
Lawrence, Graham W., Ph. B.
Leighton, Kalita E.
Livingston, Lloyd L.
Lusch, Edward F.
Lyons, James P.
McCall, Edward M.
McCleary, Francis
McCormack, Harford T.
McDermott, Thomas G., Ph. B.
McVay, James T.
Maloney, Daniel A.
Melchert, Milton M.
Miller, Clarence J., B. S.
Morris, Jay E.
Morton, Joe
Noth, Albert J.
O'Brien, Frank J.
O'Connell, Daniel J.
Orton, Eldon C.
Rank, Fred W.
Rinard, Leonard C.
Roberts, Luis M.
Robinson, Bertram L.
Rowell, Louis J., Ph. B.
Rudolph, Charles J.
Ryan, John B.
Ryan, William L., B. S.
Seaman, James W., Ph. B.
Shutts, Hervey J., A. B.
Sparks, Charles J.
Spensley, Harker B.
Stilwill, Charles M.
Thomas, David P.
Thompson, Frank E.
Tourtellot, Park W., Ph. B.

Troy, Henry M., Ph. B.
Vollmer, Frederick
Wallace, George E.
Walsh, Alfred E.
Wesche, Wilmer E.
Wilkin, Rufus F.
Wilkinson, William J.
Wilmarth, Myron E.
Wilson, James M.
Wyckoff, Fred
Whittemore, Hugh A., A. B.

DEGREES CONFERRED MARCH, 1897.

MEDICAL DEPARTMENT.

Doctor of Medicine.

Adams, Charles Blackstone, D. V. S.
Allen, Lowell Edward
Anderson, Charles Alfred
Bell, Walter Scott, B. S.
Birkofer, William Joseph
Butterbaugh, Walter Scott
Byrnes, Victor Warren
Cilley, Charles Sidney
Clauser, George Alvin, B. S.
Cunningham, John Wesley
Day, Henry E.
Decker, George Edward, B. S.
De Jong, Conrad, Jr., A. B.
Denison, Joseph Pence
Downs, Joshua A.
Edgington, Avington A.
Esbjoern, Paul Oscar, A. B.
Fobes, Henry Lawrence
Grant, Charles Schaeffer
Grimes, Eli
Hart, Raymond Lochary
Harrington, Burton
Hearst, Will L., Ph. B.
Henderson, Edward Brenton
Hewitt, Henry F.
Hewitt, Etta E.
Howe, James McPherson
Johnson, Elton Mayrant
Kenney, William Le Roy
Keehl, Fred Wilburt
King, John Ezra, D. V. S.
Klein, John Leonard
Knittle, Edward Henry
Lyon, William Edwin
McAlvin, James Gregg, Ph. B.
May, George William
Mettlen, James Harvey, D. V. S.
Milligan, William Wright
Molison, Robert Crichton, D. V. S.
Neraal, Paul O.
Packard, Chester Walter
Pattison, Dilly Nelson
Pray, Gilbert Leroy
Robinson, James William

Scripture, James Levi
Smittle, Jacob Michael
Spencer, Harry D.
Starr, Orris Ferry
Swensson, John Gustaf
Townsend, William Harold
Van Epps, Clarence, B. S.
Vorwerk, Anthony H.
Whitacre, John Charles
Whitehead, Herman Joseph
Williams, Dell E.
Williams, George Edgar
Wilson, Ellsworth, D. V. S.
Wilson, Maurice Edward, D. V. S.
Wright, Walter Nelson
Wyckoff, George Lewis

HOMŒOPATHIC MEDICAL DEPARTMENT.

Doctor of Medicine.

Battin, Jas. F.
Bywater, Wm. L.
Dun Van, Edgar K.
Ebersole, Sarah Freeburger
Fry, Arminda C.
Hansen, Jorgen W.
Hazard, Clara M.
Kauffman, Frank E.
Lillie, Bertha S.
Marvin, Harvey W.
Peck, Raymond E.
Semones, Wm. M.
Speaker, Everett E.
Struble, Linton W.
Taylor, Morrison A.
Westonberger, J. C.

Nurses.

Jenson, Cecelia A.
Raff, Mary A.

DENTAL DEPARTMENT.

Doctor of Dental Surgery.

Anderson, Arthur Lewis
Baughman, George P.
Blanchard, Frederick Channing
Boos, Casper Milton Baltis
Burns, Erwin Lester
Clark, George Edward
Conn, Frank
Dodge, Clarence Augustus
Donlon, Joseph Patrick
Fox, Charles Sumner
Griffin, Festus M.
Hasek, Voclav O.
Hough, Norman H.
James, Frank Boynton

Jones, John M.
Jones, Harry Carson
Kearns, Chas. Rudolphus
Kennedy, Elmer Francis
Leonard, George R.
Maytum, Burlington J.
Morrow, Henry, Jr.
Mueller, A. J.
Renshaw, Carroll W.
Rizer, Gustavus Earnest
Scroggs, Richard Erskine
Secor, Alson
Silvis, John C.
Smith, Roy F.
Smith, F. Potter
Toney, Samuel Breese
Wilcox, Charles Shuler

PHARMACY DEPARTMENT.

Graduates in Pharmacy.

Cooper, Zada Mary
Cozine, Irvin Vernon
Harvey, Robert Walsh
Highley, Larry Edward
Koch, August Frank
Magee, Edward Washington
McCray, Walter Robert
McMahon, Thomas
Mead, Nehemiah Paul
Reynolds, Lillie Ethel
Watters, William Leslie

COLLEGIATE DEPARTMENT.

GRADUATE STUDENTS.

Resident Candidates for the Master's Degree.

Bauer, George N., B. S.,	Differential Equations, Modern Geometric Theories.
Bowman, Charles H., B. Ph.,	Physics, Mathematics.
Brock, Frank Victor, A. B.	Economics, English.
Butler, Maud Bernadetta, B. Ph.,	History, French.
Clark, Charles W., B. Ph.,	English, Political Science.
Collson, Mary E., B. Ph.,	Economics, Speculative Zoology.
Currier, Helen Noyes, B. Ph.,	English, History.
Davis, Walter M., B. Ph.	Political Science, History,
Dorcas, Herbert C., B. Ph.,	Pedagogy, Psychology.
Fracker, George Cutler, B. Ph.,	Pedagogy, Psychology
Gibbs, George Sabin, Jr., B. S.,	Heat Relations of Resistance, Alternate Current Theory.
Gilbert, Lydia L., B. Ph.,	English, History.
Harney, Helen M., B. Ph.,	English, French.
Hartman, Russell T., B. S.,	Geology, Chemistry.
Hearst, W. L., B. Ph.,	Sociology, History.
Hensel, Blanche Alice,	Latin, English.
Hilsinger, George E., A. B.,	Political Science, English.
Jackson, Lester T., B. S.,	Chemistry, Mathematics.
Jones, Elizabeth D.,	Pedagogy, Morphology.
Kelly, Harry E., B. Ph.,	English, Political Science.
Lumbar, M. E., B. Ph.,	Pedagogy, Philosophy.
McAlvin, James Gregg, B.Ph., M.D.	Sociology, History.
Merritt, Fred D., B. S.,	Political Science, History.

Miller, L. A.,	Sociology, Public Law.
Radasch, Henry E., B. S.,	Chemistry, Physics.
Rose, Horace W., B. Ph.,	Economics, Sociology.
Savage, Thomas Edmund,	Geology, Botany.
Schlenker, Carl,	German Classic Drama, Rise of Prussia to 1830.
Sherwood, Elizabeth L., A. B.,	German, French.
Shimek, Bohumil, C. E.,	Botany, History.
*Treimer, Carl, B. Ph.,	German Language, German Literature.
Van Law, C. H., A. B.,	Political Science.
Watt, Walter G.,	Political Science, German.

Non-Resident Candidates for the Master's Degree.

Amlie, Thomas R., A. B.,	Latin, English.
Bartsch, Paul, B. S.,	Ornithology, Conchology.
Bloom, Mant, B. Ph.,	Mathematics, Physics.
Brown, Florence E., B. Ph.,	Abnormal Psychology, Animal Morphology.
Burdick, Anna Lalor, B. S.,	Latin and English Literature.
Cameron, John E., B. S.,	Botany, Zoology.
Copeland, Helen L., B. Ph.,	English, History.
Church, Frances, B. Ph.,	English, Botany.
Crary, Elisha S., B. Ph.,	Political Science, History.
Crossley, J. J., A. B.,	Political Science, History.
O'Donoghue, J. H., A. B.,	Chemistry, Geology, German.
Elson, S. R., B. A.,	History, English Literature.
Fitzpatrick, Mary Linder, B. S.,	Botany, French.
Fitzpatrick, Thomas J., B. S.,	Botany, Geology.
Gilchrist, Redelia, B. Ph.,	Latin, Anglo-Saxon.
Graves, W. A., A. B.,	Pedagogy.
Henry, May Virginia, A. B.,	Latin of Lucretius, Philosophy.
Holson, Lulu, B. Ph.,	German, French.
Hornby, John A., B. Ph.,	English Novel, German.
Kelso, Inez F., B. Ph.	History, Political Science.

*Deceased.

Kimball, Carolyn, B. Ph.,	English Literature, Psychology.
Leach, Robert E., A. B., B. Ph.,	Latin, Philosophy of Lucretius.
Lovell, Jessie R., B. Ph.,	United States History, Political Science.
Meissner, John, B. Ph.,	Pedagogy, Political Science.
Myers, F. W., B. Ph.,	Political Science, History.
Miller, Nellie B., B. S.,	Geology, Sociology.
North, Howard M., A. B.,	English History, Political Science.
Parsons, Louis A., A. B.,	Mathematics, Physics.
Rigg, George Burton, B. S.,	Cryptogamic Botany, Entomology.
Seerley, Frank N., B. Ph.,	Psychology.
Seevers, Zoe Williams, A. B.,	
Smith, Charles L., A. B.,	Classification of a Collection of Central American Plants, History of Botany.
Stanley, Clarence J.,	Chemistry, Physics.
Sueppel, J. W., A. B.,	History of Philosophy.
Thompson, Marie D., B. Ph.,	Pedagogy, English.
Thompson, George F., A. B.,	Geology.
Williams, Hermon P., A. B.,	Ethics, Economics.
Weidner, C. W., B. S.,	History, Political Science.
Whiting, Samuel Danforth, A. B.,	Latin.

Resident Graduates not Candidates for a Degree.

Barber, Katherine Brainerd, B. Ph.,
Brown, Charles Sumner, A. B., (Rochester University.)
Bailey, Charles H., B. S.,
Dey, Myra Thompson, B. Ph.,
Ditzen, Henry Edward Carl, B. Ph.,
Fickes, Clark R., B. S.,
Furbish, Frederick, B. S.,
Hammond, Juliet, A. B., (Smith College.)
Hosford, Richard Waller, A. B., (Oberlin.)
Howell, Gertrude, B, Ph.,
Hughes, Louise E., B. Ph.,
Leighton, Kalita Elton, B. Ph., (Western), LL. B.

McCleary, Lucy Josephine, B. Ph., (Simpson College.)
Mordoff, Carrie E., B. Ph.,
Moore, Sophia, B. Ph.,
Palmeter, Roy Armstrong, B. Ph.,
Paine, Katharine, B. Ph.,
Rice, Jennie G., B. Ph.,
Rinard, Leonard Cook, LL. B.,
Smith, William Avery, B. S., (Western College.)
Stahl, W. S., B. Ph., (Simpson College.)
Warner, Thomas Farnsworth, B. Ph., (Upper Iowa University.)
Watkins, Charles Grant, M. S., (Iowa Wesleyan.)
Watson, J. O., A. M., (Simpson College.)
Welty, Bert B., B. D., (State Normal.)

SENIOR CLASS.

NAME.	COURSE.	RESIDENCE.
Allin, Norra	Ph.	Iowa City.
Bailey, Arthur	El. Eng.	Charles City.
Baker, Irving Wesley	Ph.	Iowa City.
Barker, Arthur J.	Ph.	Iowa City.
Beckman, F. W.	Ph.	Manilla.
Bettenga, Everett P.	Ph.	Fern.
Bloom, Charles	Ph.	Iowa City.
Boals, Abby	Ph.	Clear Lake.
Boesche, Louise A.	Ph.	Council Bluffs.
Briggs, George N.	Cl.	Carson.
Brown, Ralph Othniel	Ph.	Albia.
Budrow, Lester R.	Ph.	Ogden.
Burge, Albertus J.	Sc.	River Junction.
Bursma, Jacob	Cl.	Grand Rapids, Mich.
Churchill, D. B.	Ph.	Dysart.
Clark, Whit H.	Sc.	Ogden.
Corlett, Jessie M.	Ph.	Iowa City.
Crane, Ezra E.	Sc.	Woodbine.
Crone, Reuben Bertram	Ph.	Dysart.

NAME.	COURSE.	RESIDENCE.
Daly, William Joseph	Ph.	Cresco.
Donohoe, Anthony P.	Sc.	Iowa City.
Dorcas, Cora	Ph.	Tipton.
Ende, August	Sc.	Burlington.
Ensign, Forest C.	Ph.	Iowa City.
Finch, Grace Ellen	Sc.	Ackley.
Foster, Charles Scott	Ph.	Agency.
Freeman, Mae Agnes	Ph.	Iowa City.
Gibbs, George Sabin, Jr.	El. Eng.	Harlan.
Gray, Maud	Ph.	Springdale.
Grimes, Frank P.	Ph.	Parnell.
Hamann, Albert W.	Cl.	Davenport.
Hanks, John	Cl.	Iowa City.
Hanson, Harry Webster	Ph.	Mt. Pleasant.
Hardman, James Elias	Cl.	Sigourney.
Heck, Ernest William	Sc.	Nauvoo, Ill.
Hetzel, Roy Boyd	Sc.	Avoca.
Hewitt, Charles Edgar	Civ. Eng.	Morning Sun.
Hobbs, Sam Warren	Ph.	Storm Lake.
Horack, Frank Edward	Ph.	Iowa City.
Huebner, Charles F., Jr.	Ph.	Iowa City.
Hull, John Kress	Ph.	Moline, Ill.
Hulsebus, Lillian	Ph.	Burlington.
Hutchinson, Harry H.	Sc.	Muscatine.
Irish, Frederic Mortimer	Sc.	Dubuque.
Iverson, Iver, Jr.	Sc.	Emmons, Minn.
Johnson, George Monroe	Sc.	Maquoketa.
Keeler, Wilfred Cecil	Ph.	Des Moines.
Kiser, Joseph Donald	Ph.	Ottumwa.
LaForce, Frank E.	Ph.	Ottumwa.
Larrabee, Frederick	Ph.	Clermont.
Lorenz, Charles F.	Sc.	Burlington.
Lynch, Charles Jeremiah	Ph.	Blairstown.
McCord, Robert Leigh, Jr.	Cl.	Lake City.
MacFarland, Beulah	Ph.	Columbus Junc'n.
MacFarland, Elena	Ph.	Columbus Junc'n.

NAME.	COURSE.	RESIDENCE.
Meissner, John	Ph.	Solon.
Miller, Justus A.	Ph.	Washta.
Moon, Edwin Griswold	Ph.	Montrose.
Otto, Mary Laura,	Ph.	Iowa City.
Paisley, Albert A.	Cl.	Burlington.
Petersberger, Isaac	Ph.	Davenport.
Pile, Mittie Mansfield	Cl.	Council Bluffs.
Popham, R. G.	Cl.	Williamsburg.
Price, George M.	Ph.	Iowa City.
Reever, William Henry	Ph.	Carrollton.
Resser, Burt C.	Cl.	Perry.
Reynolds, John	Ph.	Boone.
Sayers, Samuel Jefferson	Ph.	Iowa City,
Schaeffer, George Schuyler,	Cl.	Iowa City.
Schulze, J. Otto	Civ. Eng.	Iowa City.
Sears, Charles Wilber	Ph.	Onawa.
Seymour, Libbie	Cl.	Iowa City.
Shellenberger, Emma W.	Ph.	Humboldt.
Shepard, Hugh H.	Ph.	Mason City.
Simmons, Edmund	Cl.	Ottumwa.
Smith, Charles Samuel	Cl.	Albia.
Taylor, Katheryn May	Ph.	Clinton.
Thomas, Benjamin Franklin	Ph.	Traer.
Van Metre, Margaret	Ph.	Waterloo.
Wilkin, Frank Stephenson	Civ. Eng.	Albia.
Willis, Bernard Darwin	El. Eng.	Iowa City.
Yost, Charles Gitchell	Sc.	Center Point.
Zerwekh, Florence A.	Cl.	Valley Junction.

JUNIOR CLASS.

NAME.	COURSE.	RESIDENCE.
Anderson, Theodore,	Ph.	Iowa City.
Balle, Julius E.	Ph.	Denison.
Barker, William Lloyd	Ph.	Cresco.
Barth, George D.	Ph.	Humboldt.

NAME.	COURSE.	RESIDENCE.
Beardsley, John	Ph.	Burlington.
Bishop, Jene D.	Ph.	Marengo.
Blum, Bertha Marie	Cl.	Sioux City.
Blume, Fred M.	Cl.	Audubon.
Bond, Edward Harris	Ph.	Denison.
Brown, Samuel Joe	Cl.	Ottumwa.
Carroll, Nan Grace	Ph.	Iowa City.
Carter, George H.	Ph.	Le Mars.
Chamberlain, Park K.	Ph.	Wyoming.
Clayton, Joseph E.	Ph.	Rowley.
Clements, Melville Fisk	Civ. Eng.	Agency.
Cobb, Clyde Beryl	Ph.	Harlan.
Coldren, May Belle	Ph.	Iowa City.
Copeland, Edwin Grant	Sc.	Iowa City.
Denny, Alden Ray	Cl.	Mt. Union.
Dey, Ann Hull	Ph.	Iowa City.
Eaton, William Hammond	Sc.	Iowa City.
Emry, Martha Elva	Ph.	Brighton.
Ensign, Lucie M.	Ph.	Iowa City.
Eustis, Carl	Ph.	Stuart.
Frailey, Joseph Robinson	Ph.	Fort Madison.
Gabriel, Jennie May	Cl.	Des Moines.
Gonwick, Clara	Ph.	Northwood.
Harriman, Tim G.	Ph.	Hampton.
Hatch, Daisy Eleanor	Cl.	Iowa City.
Hobby, Edwin E.	Civ. Eng.	Iowa City.
Hollingsworth, Frank	Cl.	Perry.
Holsteen, Fred S.	Ph.	Burlington.
Horine, Ora Huntington	Ph.	Coon Rapids.
Hoskins, John Bennett	Cl.	Sioux City.
Howell, Lloyd	El. Eng.	Iowa City.
Huber, Anna Centennial	Ph.	Oskaloosa.
Hubbell, Rena	Ph.	Mortelle.
Johnson, Maro	Civ. Eng.	Iowa City.
Kearwille, Elizabeth	Ph.	Red Oak.
Kelly, Mary Celestia	Ph.	Iowa City

NAME.	COURSE.	RESIDENCE.
Kriechbaum, Ida Elizabeth	Ph.	Burlington.
Lasheck, Adelaide Elizabeth	Ph.	Iowa City.
Lenocker, Francis E.	Ph.	Dexter.
Lindeman, Frank	Sc.	Griswold.
Lodwick, Libbie	Ph.	Eldon.
Loring, Mabel Howe	Cl.	Waterloo.
Lowman, Minerva M.	Ph.	Iowa City.
Lukenbell, Ella	Cl.	Sioux City.
Lytle, Mary	Ph.	Iowa City.
Marquis, Frank L.	Cl.	Waterloo.
McCurdy, Lena	Cl.	Oskaloosa.
Mortland, James Austin	El. Eng.	Montezuma.
Mullin, Justin C.	Ph.	Iowa City.
Myers, Milfred	Ph.	Rockford, Ill.
Nelson, Josephine Deane	Ph.	Iowa City.
Northey, Della Frances	Cl.	Dubuque.
Osborn, Charlotte Winston	Ph.	Rippey.
Otto, Joe M.	Ph.	Iowa City.
Otto, Ralph	Ph.	Iowa City.
Paxson, Ruthanna	Ph.	Manchester.
Pfeiffer, W. F.	Sc.	Cedar Falls.
Place, Olney	Sc.	Georgetown, Tex.
Prall, John Cornelius	Ph.	Humboldt.
Preston, Gertrude Elaine	Ph.	Iowa City.
Robinson, Jessie	Ph.	Sioux City.
Saylor, Earl Clarence	El. Eng,	Ogden.
Schlenker, Jessie Peters	Ph.	Iowa City.
Sharpe, James Joseph	Cl.	Iowa Falls.
Shorett, J. B.	Ph.	Earling.
Smith, Ralph J.	Ph.	Iowa City.
Smith, Edward Shepard	Civ. Eng.	Harlan.
Soleman, Fred Armstrong	Ph.	Tama.
Stover, George Elmer	Ph.	Iowa City.
Stull, Wilfred N.	Sc.	Iowa City.
Swalm, Ione	Ph.	Oskaloosa.
Swisher, Leonard A.	Ph.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Taylor, Herbert Edward	Ph.	Postville.
Veblen, Oswald	Cl.	Iowa City.
Weed, Fredmund Carson	Cl.	Corning.
Weinrich, Herman P.	Ph.	Burlington.
Whitacre, Grace	Sc.	Iowa City.
Young, LeRoy Erwin	Civ. Eng.	Iowa City.

SOPHOMORE CLASS.

NAME.	COURSE.	RESIDENCE.
Adams, Georgia	Ph.	Solon.
Ady, Florence Rae	Ph.	Iowa City.
Alford, Della Gates	Ph.	Waterloo.
Ankeney, Walter S.	Sc.	Des Moines.
Bailey, Will J.	Ph.	Iowa City.
Baker, J. Clark, Jr.	Ph.	Lucas.
Barber, Nathan Brainerd	Civ. Eng.	Iowa City.
Barclay, Wade C.	Cl.	Tiffin.
Baughman, Ruby	Cl.	Jefferson.
Blackmore, Ralph Davis	Sc.	Aplington.
Bowman, Ernest Charles	El. Eng.	Solon
Bradley, Charles C.	Cl.	Council Bluffs.
Brink, Frank N.	Sc.	Atlantic.
Brown, James Archibald	Sc.	Keosauqua.
Brown, Joseph Wesley	Sc.	Atlantic.
Brush, William Burritt	Cl.	Ottumwa.
Brusie, Ida M.	Ph.	Peoria, Ill.
Burt, Alfred James	Ph.	Emmetsburg.
Cantwell, John D.	Sc.	Davenport.
Carr, Hubert	Ph.	Manchester.
Cash, W. H.	Ph.	Decatur.
Chase, Will B.	Sc.	Des Moines.
Clayton, Mrs. J. E.	Ph.	Iowa City.
Coad, Harry Elmer	Ph.	Mt. Union.
Codner, Frances T.	Sc.	New London.

NAME.	COURSE.	RESIDENCE.
Collins, Roy A. Miles	Ph.	Eldora.
Colony, H. Lee	Ph.	Tiffin.
Curtis, Maurice Leonard	Cl.	Knoxville.
Dameron, James Lewis	Cl.	Iowa City.
Dean, Ray H.	Sc.	Muscatine.
Dean, William T.	El. Eng.	Springville.
Denton, Harvey Struble	Ph.	Iowa City.
Dunham, Mattie A.	Ph.	Mason City.
Ehret, Anna Lillian	Ph.	Iowa City.
Foster, Mabel Marcella	Ph.	Iowa City.
Freligh, Clarence Neil	Sc.	New Sharon.
Garrett, Charles Reese	Cl.	Troy.
Giese, Charles Oscar	Ph.	Pleasant Grove.
Gilchrist, Helen Cox	Ph.	Iowa City.
Golden, Ethel Rose	Ph.	Vinton.
Graff, Lulu A.	Sc.	Iowa City.
Greeley, Lennie Mabyn	Ph.	Iowa City.
Ham, John Webb	El. Eng.	Iowa City.
Hanson, Roy Marsh	Ph.	Mt. Pleasant.
Hastings, Jessie Pearle	Sc.	Iowa City.
Hering, James C.	Sc.	Center View, Mo.
Hoag, Lindley Murray	Ph.	Iowa Falls.
Hobby, Ruth Annis	Sc.	Iowa City.
Holbrook, Frank Kinney	Sc.	Tipton.
Holt, John Wesley	Ph.	Swedesburg.
Horack, H. Claude	Ph.	Iowa City.
Howard, Libbie	Ph.	Jefferson.
Hull, Elmer C.	Ph.	Iowa City.
Humphrey, Charles William	Ph.	Winterest.
Hutchison, Eugene	Ph.	Lake City.
Ink, Raymond P.	Civ. Eng.	Mt. Vernon.
Jacobs, Marcia A.	Cl.	Iowa City.
Jarvis, Calvin	Ph.	Iowa City.
Jayne, Eben Hay	Civ. Eng.	Iowa City.
Jones, Lillian	Ph.	Iowa City.
Joy, Florence Livingston	Cl.	Iowa City.
Kehoe, John Joseph	Ph.	Hopkinton.

NAME.	COURSE.	RESIDENCE.
Kellogg, Charles Francis	Ph.	Burt.
Kemmerer, T. Wilbert	Sc.	Eldridge.
Kimball, Alfred Lee	Sc.	Iowa City.
Koehler, Sophia Margaret	Cl.	Le Mars.
Lancaster, Henry Hay	Ph.	Allerton.
Lee, Leslie Parvin	Ph.	Iowa City.
Loomis, William W.	Ph.	Clermont.
Louis, John J.	Ph.	Harlan.
McCormick, John B.	Cl.	Churdon.
McCutchen, Lydia May	Cl.	Rock Rapids.
McDonnell, Amelia I.	Ph.	Solon.
MacFarland, Winifred	Ph.	Columbus Junction.
McGee, John U. B.	Ph.	Iowa City.
Meier, Charles George	Civ. Eng.	Farmington.
Middleton, Edward D.	Ph.	Davenport.
Miller, Martin J.	Ph.	Montrose.
Moon, Roy	Cl.	Montrose.
Moore, Alice Edith	Cl.	Le Mars.
Moore, Sybil Jane	Cl.	Le Mars.
Morrison, Sam J.	Ph.	Iowa City.
Mosnat, H. Roy	Ph.	Belle Plaine.
Myers, Perry C.	Sc.	Williamsburg.
Neal, Frank Carlton	Ph.	Stuart.
Ogden, John Francis	Ph.	Pleasanton.
Owen, Ezra Lois	Ph.	Iowa City.
Page, Clarence Vernon	Cl.	Iowa City.
Parsons, Ethel Baker	Ph.	Iowa City.
Parsons, Percy Leigh	Ph.	Traer.
Peet, Delbert C.	Ph.	Anamosa.
Popham, Jessie	Cl.	Williamsburg.
Pritchett, Edward	Ph.	Fort Madison.
Randall, Emma J.	Ph.	Iowa City.
Rea, George Morris	Ph.	Grundy Center.
Rea, Ralph Randolph	Sc.	Grundy Center.
Rederick, John Edward	Civ. Eng.	Sioux City.
Remley, Bertha	Ph.	Anamosa.

NAME.	COURSE.	RESIDENCE.
Riggs, Hattie	Ph.	Iowa City.
Roach, Louis J.	Ph.	Rock Rapids.
Roberts, Anna E.	Ph.	Iowa City.
Rogers, David Montford	Sc.	Radcliffe.
Safley, Agnes Isabel	Sc.	Tipton.
Schoonover, George L.	Sc.	Anamosa.
Seymour, Edith Maria	Sc.	Iowa City.
Shaffer, Nina R.	Ph.	Iowa City.
Sheuerman, Jacob L.	Ph.	Des Moines.
Smith, Tillman	Ph.	Leon.
Startsman, Charles Wentworth	El. Eng.	Iowa City.
Stevens, Frederick Leroy	Ph.	Iowa City.
Stover, Jacob Edwin	Ph.	Iowa City.
Stromsten, Frank Albert	Sc.	Corydon.
Summy, Roy Ernest	Cl.	Dysart.
Swisher, Ben	Ph.	Iowa City.
Tompkins, Harry D.	Civ. Eng.	Sioux City.
Townsend, Egbert R.	Ph.	Iowa City.
Vaughn, Michael Walter	Ph.	Fort Dodge.
Vaughn, Philip T.	Ph.	Fort Dodge.
Watkins, Joseph Cook	Civ. Eng.	Iowa City.
Way, Kathryn W.	Ph.	Britt.
Weeks, Gaylord	El. Eng.	Denison.
Weld, LeRoy Dougherty	Sc.	Nevada.
Werthmueller, Ferdinand R.	Sc.	Burlington.
White, Frank G.	Civ. Eng.	Winterset.
Wickersham, Dorothy T.	Ph.	Capron.
Willett, William S.	Cl.	Tama.
Williams, Charles Allyn	Cl.	Iowa City.
Williams, Fred Almon	Ph.	Neola.
Williams, Mabel Clare	Ph.	Iowa City.
Williams, Mark Wayne	Cl.	Des Moines.
Yule, Edgar Harrison	Sc.	Tipton.

FRESHMAN CLASS.

NAME.	COURSE.	RESIDENCE.
Abersol, Edward Joe	Ph.	Metamora, Ill.
Albert, Henry	Sc.	Reinbeck.
Angus, Haney Adelbert	Sc.	Burt.
Appelman, Roger	Sc.	Clermont.
Armstrong, William John	Ph.	Canton, Minn.
Arnold, Henry Stephen	Ph.	Davis City.
Ashby, Eleanor Priscilla	Ph.	Pilotburg.
Baker, Frank Milton	Ph.	Emmetsburg.
Balle, Minnie	Ph.	Denison.
Barrett, Anna M.	Cl.	Iowa City.
Barrett, Grace Adah	Ph.	Iowa City,
Bassett, Bertha A.	Ph.	Creston.
Beach, Carl Hoff	Sc.	Cedar Falls.
Beard, William Finis	Civ. Eng.	Mt. Union.
Beck, William Edmund	Sc.	Sioux City.
Blackmore, Auzman Hodgen	Sc.	Aplington.
Bloom, Blanche	Ph.	Iowa City.
Bloom, Myra	Ph.	Iowa City.
Blythe, Edward Ellsworth	Ph.	Williamsburg.
Bossert, Fred Everett	Ph.	Tipton.
Bostedo, Elizabeth	Ph.	Oak Park, Ill.
Bowlus, George Fletcher	Civ. Eng.	Cedar Rapids.
Brock, Mrs. Lesta M.	Ph.	Iowa City.
Brown, Martha Mead	Ph.	Solon.
Burge, Jennie	Ph.	River Junction.
Burich, Amelia	Ph.	Iowa City.
Carroll, Elizabeth F.	Ph.	Iowa City.
Cass, Austin	El. Eng.	Harlan.
Chamberlain, Will W.	Ph.	Wyoming.
Childs, Hal Augustin	Sc.	Lenox.
Choate, Earl Robbins	El. Eng.	Hailey, Idaho.
Clapp, Helen Leila,	Ph.	Shelby.
Clark, Mearl	Ph.	Tipton.
Clearman, Hattie M.	Ph.	Oxford.

NAME.	COURSE.	RESIDENCE.
Close, S. R.	Ph.	Iowa City.
Cobb, Dennis J.	Ph.	Irwin.
Cogswell, Charles Herbert, Jr.	Sc.	Cedar Rapids.
Coldren, Morton Leigh	Ph.	Iowa City.
Cole, Arthur Casburn	Ph.	Waterloo.
Consigny, Eugene Frank	El. Eng.	Avoca.
Cook, Wallace Lewelling	Ph.	Davenport.
Cozine, Arthur A.	Ph.	Iowa City.
Darrow, John Donald	Ph.	Columbus Junct'n.
Deems, Oren Manferd	Sc.	Ottumwa.
DeVoll, Eula Carlotta	Ph.	Glens Falls, N. Y.
Duval, Harvey M.	Sc.	Atlantic.
Edwards, Anne	Ph.	Iowa City.
Egan, George William	Cl.	California.
Eickelberg, William Chester	Ph.	Waterloo.
Ellis, Ard Hoyt	Sc.	Vinton.
Eustis, Carrie Luella	Ph.	Stuart.
Fairall, Henrietta	Ph.	Iowa City.
Fairall, Herbert Snowden, Jr.	Sc.	Iowa City.
Fairall, Mattie Iglehart	Ph.	West Branch.
Farrington, Minnie	Sc.	Iowa Falls.
Fee, Thomas G.	Ph.	Centerville.
Ferson, Merton Leroy	Ph.	Frendale.
Fitzpatrick, Dennis Francis	Ph.	Greeley.
Fletcher, George H.	Ph.	Williamsburg.
Fracker, Nora R.	Ph.	Iowa City.
Geesaman, Charles E.	Ph.	Greenfield.
Gillette, Guy M.	Ph.	Cherokee.
Goodale, Aurora	Ph.	Tipton.
Green, Ellen Cecilia	Cl.	Sioux Ciiy.
Groendycke, Clark L.	Sc.	Iowa City.
Hanson, Mabel A.	Ph.	Mt. Pleasant.
Harkness, Gordon Follett	Sc.	Iowa City.
Hartman, Amelia	Ph.	Griswold.
Hartmann, Carl Gottfried	Cl.	Brenham, Texas.
Hawk, Ira T.	Cl.	Winterset.

NAME.	COURSE.	RESIDENCE.
Heath, Maggie May	Ph.	Iowa City.
Hecht, Ralph Henry	Ph.	Tipton.
Heinly, Vera Alberta	Ph.	Durant.
Hensen, Louie	Ph.	Denison.
Hetzel, Clarence Charles	Sc.	Avoca.
Hinchon, William D.	Ph.	Algona.
Hoffman, William Louis	Ph.	Waterloo.
Hoffman, Frank Phillip	Sc.	Ottumwa.
Howard, Libbie	Ph.	Jefferson.
Hubbard, Arthur B.	Ph.	Maquoketa.
Hummer, William James	Sc.	Iowa City.
Humphrey, Almon Eugene	Ph.	Unity.
Humphrey, Wallace George	Ph.	Hamilton, Ill.
Hunter, Lemuel Amos	Civ. Eng.	Iowa City.
Hurst, Margaret Lillian	Cl.	Leon.
Johnson, Jessie Florence	Cl.	Farlin.
Johnson, Robert J.	Ph.	Holstein.
Jones, Clyde Ray	Sc.	Charles City.
Kain, Will E.	Ph.	Algona.
Kelly, Marjorie Aline	Ph.	Williamsburg.
Kierulff, Anna Edwards	Ph.	Montezuma.
Kierulff, George Browning	Sc.	Montezuma.
Kindall, Joseph W.	Cl.	Onawa.
Kingland, Thomas	Ph.	Mt. Valley.
Klinker, John	Ph.	Denison.
Klopp, Laura Emily	Ph.	Estherville.
Knapp, Leo	Ph.	Lenox.
Koontz, George Wilson	Sc.	Iowa City.
Lane, Everett Elmer	Sc.	Red Oak.
Larrabee, Helen	Ph.	Clermont.
Leitz, Nellie Mabel	Ph.	Iowa City.
Lingo, Walter M.	Ph.	Norwich.
Littig, Edward Clarence	Cl.	Davenport.
Lorenz, Max O.	Cl.	Burlington.
Losey, Florence	Ph.	Parkersburg.
Louis, Edmund J.	Ph.	Atlantic.

NAME.	COURSE.	RESIDENCE.
Lovell, G. E.	Ph.	Garner.
McCauliff, Guy T.	Sc.	Aredale.
McCord, Clyde W.	Cl.	Iowa City.
McCornack, Callie D.	Cl.	Traer.
McCutchen, T. C.	Ph.	Holstein.
McDowell, William Orrin	Ph.	Waterloo.
McElroy, G. A.	Sc.	Tabor.
McGee, Alice Florence	Ph.	Iowa City.
McMillan, Edwin C.	Sc.	Marshalltown.
McNeill, Norah	Ph.	Garden Grove.
Mauthe, Katherine	Sc.	Gracehill.
Meggers, Frank Henry	Civ. Eng.	Dysart.
Miller, James Franklin	Sc.	Strawberry Point.
Miller, John William, Jr.	Ph.	Manning
Mitchell, Ernest Roy	Sc.	Bloomfield.
Moody, Lona Lotus	Ph.	Bedford.
Moore, Rolland B.	Sc.	Iowa City.
Morrison, William F.	Ph.	Iowa City.
Moulton, Mark Mills	Cl.	Nashville.
Myers, Edgar C.	Ph.	Hampton.
Newbold, Belle	Sc.	Hillsboro.
Newcomer, Carl S.	Ph.	Eldora.
Nicholas, Edwin Herbert	Ph.	Emmetsburg.
O'Connor, James Lawrence	Sc.	Montreal.
Ogden, Raymond Davis	Ph,	Williamsburg.
Page, Edna E.	Cl.	Iowa City.
Paris, Nanna	Cl.	Leon.
Patrick, Alex Gerrish	El. Eng.	Lyons.
Pearson, Abbie B.	Cl.	Dysart.
Pennell, Iva	Cl.	Atlantic.
Penrose, Thomas Emlen	Sc.	West Branch.
Petersen, Walter Herman	Ph.	Davenport.
Peterson, Nina Margaret	Ph.	Evanston, Wyo.
Phillips, Albin Blackmore	Sc.	Creamery.
Pinkham, Leda	Ph.	Miller, S. Dak.
Polk, Mamie	Cl.	Winterset.

NAME.	COURSE.	RESIDENCE.
Pond, Alma B.	Ph.	Fredericksburg.
Porter, Mary Monta	Cl.	Albia.
Purdy, Winifred	Ph.	Iowa City.
Rehkopf, Ned B.	Ph.	Des Moines.
Reid, Frank Beatty	Cl.	Oskaloosa.
Remley, James Edward	Ph.	Anamosa.
Reno, Margaret	Ph.	Iowa City.
Reynolds, Hal Reade	Civ. Eng.	Des Moines.
Rice, Stephen Edward	Civ. Eng.	Green Mountain.
Rich, Francis Earle	Sc.	West Branch.
Richardson, Lida Winifred	Sc.	Sioux City.
Rickard, Sidney M.	Ph.	Tipton.
Robinson, Alta Aileen	Ph.	Iowa City.
Robish, Albert Arrand	Civ. Eng.	Sumner.
Rosenberg, Moses	Ph.	Traer.
Rue, Lars O.	Sc.	Ridgeway.
Russell, Erle W.	Cl.	Adel.
Safley, Margaret James	Ph.	Tipton.
Sargent, Fred Wesley	Ph.	Akron.
Sailor, Edwin Allen	Ph.	Lisbon.
Sanders, Susan Margarite	Ph.	Iowa City.
Saunders, Herbert C.	Ph.	Manilla.
Saunderson, William Graham	Cl.	Burlington.
Scales, Richard Elmo	Cl.	Ackley.
Schenk, Erwin	Sc.	Waterloo.
Schmidt, Bernard Edward	Sc.	Farmington.
Secrest, Walter S.	Sc.	Downey.
Shaver, Bird Alexander	Ph.	Red Oak.
Sheldon, Benj. L.	Sc.	Iowa City.
Shuck, May	Ph.	Iowa City.
Simonton, T. M.	Ph.	Sharon Center.
Slater, Marie W.	Ph.	Iowa City.
Smith, Robert L.	Ph.	Leon.
Sortor, Stella Luverne,	Ph.	Iowa City.
Speers, Albert Percy	Ph.	Iowa City.
Spurgeon, Floris J.	Sc.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Starr, Charles Freeman	Ph.	Emmetsburg.
Steiner, Elizabeth Margaratt	Ph.	Iowa City.
Sterling, Editha Hortense	Ph.	Iowa City.
Stover, Bessie E.	Ph.	Iowa City.
Switzer, Lester Edison	Ph.	Iowa City.
Thomas, M. Ellen	Ph.	Iowa City.
Thomas, Will H.	Ph.	Traer.
Thompson, John Morrow	Civ. Eng.	Bedford.
Vincent, George Hall	Sc.	Davenport.
Vorhees, Edna Marion	Ph.	Waterloo.
Voss, Hertha Louise	Ph.	Davenport.
Wambach, Albert	Ph.	Webster City.
Warfield, Lyford Wilson	Ph.	Des Moines.
Warner, Loren Ashley	Ph.	Luana.
Warren, Kate S.	Ph.	Iowa City.
Watland, Maynard Franklin	El. Eng,	New Sharon.
Webb, Florence R.	Ph.	Iowa City.
Weinrich, Oscar L. A.	Sc.	Burlington.
Wells, Frank	Ph.	Miles.
Whaley, Holsa Hiram	Sc.	Aplington.
Whitaker, Ellis J.	Cl.	Davenport.
Whitcomb, Bonner	El. Eng.	Des Moines.
Wienke, Laura Anna	Sc.	Iowa City.
Willis, Bertha B.	Ph.	Iowa City.
Wright, John Henry. Jr.	Sc.	Marshalltown.
Yates, Edward Gilbert	Ph.	Williamsburg.
Young, Philip G.	Ph.	Winterset.

SPECIAL STUDENTS.

NAME.	COURSE.	RESIDENCE.
Ashe, T. G.	Economics.	La Porte City.
Barrett, Will L.	English.	Waterloo.
Bliven, George	History.	Sioux City.
Brown, Jennie R.	Botany.	Iowa City.
Bussard, M. K.	Political Economy.	Iowa City.
Crookham, J. A.	Economics.	Oskaloosa.

NAME.	COURSE.	RESIDENCE.
Davisson, I. E.	English Literature.	Iowa City.
Dwelle, Elmer H.	Psychology, German.	Northwood.
Erickson, Alexander	Political Economy, History.	Sioux City.
Everett, F. D.	German, French.	Bloomfield.
Ewing, Peter Ballantyne	Logic.	Sheldon.
Fernstrom, Helen M.	English, History.	Lone Tree.
Gossman, Andrew T.	Political Economy.	Iowa City.
Hall, J. Clark	History.	Davenport.
Henderson, Robert	History, Economics.	Creston.
Hill, Mrs. Alice L.	Chemistry.	Iowa City.
Holbert, Mrs. Anne C.	English, French.	Iowa City.
Humphrey, Minnie	English.	Iowa City.
Joseph, John F.	American Literature.	Crawford.
Keeler, Burr Curtis	Logic, History.	Mason City.
Kelly, William Francis	History.	Waterloo.
Lenz, John G.	German, History.	Cedar Rapids.
Liffring, J. D.	German.	Cherokee.
Littig, Marguerite Josephine	French, German.	Davenport.
McConnell, William John	Logic.	Northfield.
McGuire, Augustine J.	Elocution.	Des Moines.
Main, Frank H.	Politics, Psychology.	Iowa City.
Marsh, William Franklin	Pedagogy.	Eldora.
O'Connor, Frank A.	Economics, History.	Independence.
Plank, Nicholas	English.	Iowa City.
Plum, W. M.	History.	Iowa City.
Probasco, Emery M.	Logic.	Moulton.
Rudolph, Samuel Howard	Logic.	Elliott.
Searcy, William A.	Psychology.	Iowa City.
Sharp, E. Floyd	Economics.	Dexter.
Sheldon, Nellie	Logic, History.	Iowa City.
Stapleton, Martin William	Logic.	Nira.
Trogdon, James Edmund	Elocution.	Paris, Ills.
Underwood, A. B.	French.	Eldora.
Whiteis, Alice Fernstrom	German.	Iowa City.
Williams, William D.	Logic.	Newell.

LAW DEPARTMENT.

SENIOR CLASS.

NAME.	DEGREE.	RESIDENCE.
Alderman, Ulysses Sherman		Nevada.
Allen, Everet Munson		Colfax.
	B. S., Northern Indiana Normal.	
Ashcraft, Adolphus Mosseau		Sigourney.
Ashcraft, Ida Jessup		Sigourney.
Bates, Franklin Freeman		Afton.
Beach, Arthur Earl		Carroll.
Bouma, Milton S.		Killduff.
Brady, Thomas Edward		Dunlap.
Briggs, Arthur Holmes		Clinton.
Brockway, Earl Bailey		Garner.
	A. B., State University of Iowa.	
Brown, John J.		Hanoverton, O.
Bruce, Robert		Rolfe.
Burling, Charles Glenn		Postville.
	Ph. B., State University of Iowa.	
Burrell, Walter C.		Greenfield.
Camp, Curtis Byron		Keokuk.
Carroll, Edward John		Clinton.
Colburn, Henry Broadly		Dexter.
Cooper, Paul Fenimore		Iowa City.
Corrigan, John Louis		Lawler.
Daniger, Henry Matthew		Omaha, Nebr.
Davis, John Walter		Monroe.
Devitt, James Arthur		Eldora.
Ditzen, Henry Edward Carl		Davenport.
	Ph. B., State University of Iowa.	

NAME.	DEGREE.	RESIDENCE.
Dorland, Henry Howard		Whittier, Cal.
Edelstein, John Francis		Iowa City.
Evans, William Thomas		Waterloo.
	Ph. B., State University of Iowa.	
Everett, Fred De Muth		Bloomfield.
Ewing, Peter Ballantyne		Sheldon.
Goeldner, Hugo Friedrich		Sigourney.
Graham, Tully Emerson		Union Mills.
Graham, William Alexander		Cedar Falls.
Griggs, Edgar James		Bloomfield.
Groves, Mack John		Greenfield.
Haines, Robert Miller, Jr.,		Grinnell.
	A. B., Iowa College.	
Halvorson, Gay		Crookston, Minn.
Hammill, John		Britt.
Harriman, Fred Albion		Hampton.
Holbrook, Carleton William		Manchester.
	A. B., Upper Iowa University.	
Hoxie, Wirt Pierce		Waterloo.
Keeler, Burr Curtis		Mason City.
Kehoe, John Joseph		Hopkinton.
Kingsbury, Charles Stone		Yankton, S. D.
Kintzinger, John Webster		La Crosse, Wis.
Kirkland, Louis J.		Urbana.
Lattner, Samuel Benjamin		Worthington.
Lewis, Edward Orin		Sioux City.
Lovrien, Fred Clinton		Bradgate.
Lumm, Alfred W.		Iowa City.
McCoy, John Nicholson		Oskaloosa.
	A. B., State University of Iowa.	
McGarvey, William Albert		Davenport.
Mack, Mansfield Edward		New York, N. Y.
Maine, Ernest King		Des Moines.
	A. B., State University of Iowa.	
Mayer, Stephen George		Hebron.
	A. B., Iowa Wesleyan University.	

NAME.	DEGREE.	RESIDENCE.
Mercer, Andrew Wilbert		Iowa City.
Miller, Justus A.		Washta.
	B. S., Western Nebraska Normal.	
Mueller, Alfred Christian		Davenport.
Mugan, Thomas Aguinas		Jefferson.
Newman, James Barber		Cedar Falls.
Palmeter, Roy Armstrong		Clear Lake.
	Ph. B., State University of Iowa.	
Pendleton, Edmund		Sioux City.
	B. L., University of Wisconsin.	
Petersberger, Isaac		Davenport.
Plum, Jerrie L.		Iowa City.
Power, Howard Wilson		Pulaski.
	B. S., Iowa Wesleyan University.	
Probasco, Emery Melville		Moulton.
Quinn, James Lewis		Springfield, S. D.
Rudolph, Samuel Harry		Elliott.
Sallman, Karl Elof		Corydon.
Seaman, Ernest Wright		Davenport.
Slaymaker, Ora Melvin		Carnforth.
Smith, Samuel Craig		Winterset.
	Ph. B., State University of Iowa.	
Snyder, Charles William Edward		Belle Plaine.
	A. B., Cornell College.	
Spensley, Robert Waller		Dubuque.
Stahl, William Sherman		Indianola.
	Ph. B., Simpson College.	
Stapleton, Martin William		Nira.
Stempel, Carl Hugo		Fort Madison.
	Ph. B., State University of Iowa.	
Thomas, Charles Mortimer		Maquoketa.
Van Nice, Issac Webster		Vinton.
Wakefield, Albert Orin		Sioux City.
	A. B., Lombard University.	

NAME.	DEGREE.	RESIDENCE.
Walling, Herman Bernard		Oto.
Washburn, Charles Henry		Buffalo, N. Y.
Watkins, Charles Grant		Libertyville.
	M. S., Iowa Wesleyan University.	
Watson, Joseph Otis		Indianola.
	A. M., Simpson College.	
White, William Allen		Washington.
Williams, William David *		Newell.
Wilson, Edwin Brown		Iowa City.
	Ph. B., State University of Iowa.	
Winters, Samuel Louis		Mt. Pleasant.
	A. M., Iowa Wesleyan University.	
Wood, Benjamin Upham		Atlantic

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JUNIOR CLASS.

NAME.	DEGREE.	RESIDENCE.
Allen, George Kirkland		Estherville.
Anderson, Theodore		Iowa City.
Ashe, Thomas Gregory		La Porte City.
Baker, Jesse Clark, Jr.,		Lucas.
Barrett, Will Louis		Waterloo.
Bassett, Bertha Alfaretta		Creston.
Bawden, Stephen Phelps		Davenport.
Berry, Ernest James		Alta.
Bliven, George Horace		Sioux City.
Blood, William Graffen		Keokuk.
	A. M., Parsons College.	
Brewster, George Farquhar		Sheldon.
Briggs, George Nathaniel		Carson.
Bronner, George Alois		Corning.
Bruce, James		Rolfe.
Bushyager, Henry B.		Sheffield.

*Died February 21, 1897.

NAME.	DEGREE.	RESIDENCE.
Bussard, Melville K.		Iowa City.
Camp, Robert Finley		La Porte City.
Chick, Charles Alvin		Oskaloosa.
Clark, Charles Warner	Ph. B., Iowa College.	Montezuma.
Clements, Frank H.	Ph. B., Iowa College.	Newton.
Coad, James Coit		Mt. Pleasant.
Cobb, Dennis Justus		Irwin.
Coldren, Paul Alfred		Iowa City.
Crone, Reuben Bertram		Dysart.
Crookham, John Addison		Oskaloosa.
Dabney, Isaac Taylor		Bloomfield.
Davis, Walter Morton	Ph. B., State University of Iowa.	Iowa City.
DeBelle, Elizabeth Heartt	A. M., Capitol Female College.	Atlanta, Ga.
Doran, James Arthur		Pulaski.
Draper, William Horace		Conrad.
Dunham, Henry Clarence		Hawarden.
Durbin, Fred		Emerson.
Dutcher, Louis William		Iowa City.
Dykins, Charles W.		Hawkeye.
Egan, George William		California.
Erickson, Alexander		Sioux City.
Eversmeyer, Louise		Muscatine.
Faust, Paul Elbert		Creston.
Fuller, Homer Austin		Mt. Ayr.
Gamble, Harry Lee		Perry.
Grattan, Paul Hersey	B. S., South Dakota Agricultural College.	Elkton, S. D.
Green, George Alfred		Cherokee.
Grimes, Frank Patrick		Parnell.
Hall, James Clark		Davenport.
Hall, Samuel McClain	B. S., Coe College.	Cedar Rapids

NAME.	DEGREE.	RESIDENCE.
Hamann, Albert William		Davenport.
Hanley, Peter Joseph		Nira.
Hanson, Harry Webster		Mt. Pleasant.
Hardy, Rufus Lee		Bloomfield.
Harrington, Timothy P.		Rowan.
Harrison, Albert Dixon		Iowa City.
Head, Roscoe Conkling		Jefferson.
Hendrick, Berte		Waukon.
Hering, James Clinton		Cedar Rapids.
Hilley, William Patrick Joseph		Ogden.
Hilsinger, George Earl		Sabula.
	Ph. B., Iowa College.	
Hoagland, Frederick Judson		Council Bluffs.
Hoffman, Arthur		Muscatine.
Holton, Oliver Branson		Braddyville.
Horton, Frank Jodon		Iowa City.
Hosford, Richard Waller		Dubuque.
	A. B., Oberlin College.	
Hughes, Samuel Judson		Corydon.
Hull, John Kress		Moline, Ill.
Hyndman, John Alexander		Chicago, Ill.
Ink, Raymond Peter		Mt. Vernon.
Joseph, John Franklin		Crawford.
Keenan, Edward Patrick		Le Mars.
Kellogg, Charles Francis		Iowa City.
Kelly, William Francis		Waterloo.
Kitchen, George Pusey		Iowa City.
Klingenberg, Theodore William		Dubuque.
Komarek, Edward Wenceslaus		New Prague, Minn.
Krause, Oscar		Garwin.
Larrabee, Frederic		Clermont.
Lee, Thomas Francis		Omaha, Nebr.
	A. B., Creighton University.	
Lewis, Burton Kellogg		Sioux City,
Liffring, John Dominick		Cherokee.

NAME.	DEGREE.	RESIDENCE.
Livick, Ernest		Northwood.
Long, Frank Kelso		Whitten.
	B. D., Western College.	
Lynch, Charles Jeremiah		Blairstown.
McConnell, William John		Northfield.
McGuire, Augustine Joseph		Des Moines.
McNeil, Harry Hallam		Indianola.
	A. B.. Simpson College.	
Marquis, Frank L.		Waterloo.
Mather, Charles E.		Springdale.
Maxwell, Ezra Austin		Greene.
	B. S., Upper Iowa University.	
Meister, Melvin George		La Porte City.
Meyers, Joseph Henry		Templeton.
	B. Agri., Iowa Agricultural College.	
Moon, Edwin Gould		Montrose.
Morgan, Vester		Kellogg.
Morrison, Samuel Turner		Iowa City.
Murphy, Charles William		Dubuque.
Newbold, Willis Boyd		Hillsboro.
O'Callaghan, Robert Emmett		Des Moines.
O'Connor, Frank Aloysius		Lawler.
O'Connor, Maurice		Missouri Valley.
	B. D., Western Normal College.	
Penrose, Harry		Shellsburg.
Phelps, William Platt		Atlantic.
Plum, William Milton		Shelby.
Popham, R. G.		Williamsburg.
	B. S., Northern Indiana Normal.	
Price, George Milnes		Iowa City.
Pritchett, Edward		Fort Madison.
Radnich, Emric		Davis City.
Resser, Burt C.		Perry.
Rollins, Richard Russell		Des Moines.
	B. S., Amherst College.	

NAME.	DEGREE.	RESIDENCE.
Rominger, Joseph Ambrose		Bloomfield.
Sears, Charles Wilber		Onawa.
Sharp, Edward Floyd		Dexter.
Shorett, John Burton		Earling.
Shure, William Henry		Page, N. D.
Skewis, Edward John		Inwood.
Smith, William Avery		Toledo.
	B. S., Western College.	
Spensley, Montford		Mineral Point, Wis.
Sullivan, Daniel Francis		Iowa City.
Swords, George William		Iowa City.
Trogdon, James Edmund		Paris, Ill.
Tyer, Henry Wilbert		Perry.
	B. S., Iowa College.	
Underwood, Asa Boyden		Eldora.
Wagner, Henry Franklin		Sigourney.
Warner, Thomas Farnsworth		Iowa City.
	Ph. B., Upper Iowa University.	
Watkins, Samuel R.		Iowa City.
	Ph. B. State University of Iowa.	
Watt, Walter Gilmore		Cedar Rapids.
	A. B., Coe College.	
Weed, Howard Tobey		West Union.
Welty, Bert B.		Colo.
	B. D., Iowa State Normal.	
Williams, Joe		Williamsburg.
Worthen, Jesse Montgomery		Warsaw, Ill.
Wyckoff, Clarence Stanton		Cincinnati.
	B. S., Amity College.	
Youker, DeWitt Talmage		Rockwell.

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MEDICAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Adams, Chas. Blackstone, D. V. M.,	Iowa.	C. J. Allen.
Allen, Lowell Edward	Minnesota.	M. L. Allen.
Anderson, Charles Alfred	Nebraska.	L. M. Shaw.
Bell, Walter Scott, B. S.,	Ohio.	S. W. Clark.
Birkofer, Wm. Joseph	Iowa.	Walter Frazer.
Bossingham, Ottmer N., D.V.M.	"	A. Beane.
Butterbaugh, Walter Scott	"	Faculty.
Byrnes, Victor Warren	"	Thomas Byrnes.
Cilley, Charley Sidney	"	J. C. Williams.
Clauser, George Alvin, B. S.,	"	J. L. Augustine.
Cunningham, John Wesley	"	A. J. Hobson.
Day, Henry E.	"	G. W. Appleby.
Decker, George Edward, B. S.,	"	W. D. Middleton.
De Jong, Conrad, Jr., A. B.,	"	F. J. Smith.
Denison, Joseph Pence	"	J. H. Sams.
Detchon, Hugh Smith	"	A. R. Leath.
Downs, Joshua A.	"	J. W. Kirkpatrick.
Edgington, Avington A.	"	C. W. Hardman.
Esbjoern, Paul Oscar, A. B.,	Illinois.	A. W. Cantwell.
Fobes, Henry Lawrence	Iowa.	R. W. Cavett.
Grant, Charles Schaeffer	"	Faculty.
Grimes, Eli	"	Perry Engle.
Hart, Raymond Lochary	Nebraska.	G. M. Prentice.
Harrington, Burton	Iowa.	A. C. Moon.
Hearst, Will E., B. Ph.,	"	D. W. Crouse.
Henderson, Edgar Brenton	"	J. D. McCleary.

NAME.	RESIDENCE.	PRECEPTOR.
Hewett, Henry F.	Iowa.	C. S. Chase.
Hewitt, Mrs. Etta E.	"	C. S. Chase.
Howe, James McPherson	"	Eli Browning.
Johnson, Elton Mayrant	"	J. B. Carder.
Keehl, Fred Wilbert	"	L. W. Littig.
Kenney, William Le Roy	"	J. A. Rawls and F. E. Sampson.
King, John Ezra, D. V. M.,	"	E. W. Gawley.
Klein, John Leonard	"	James Murphy.
Knittle, Edward Henry	"	A. B. Bowen.
Lyon, William Edwin	"	W. S. Parks.
McAlvin, James Gregg, Ph. B.,	"	D. M. Wick.
Marug, Andrew, A. B.,	"	J. G. Thomas.
May, George	"	John Heffermen.
Mettlen, Jas. Harvey, D. V. M.	Nebraska.	J. B. Hawk.
Milligan, William Wright	Iowa.	J. C. Shrader.
Molison, Rob't Crichton, D.V.M.	"	Faculty.
Neely, Abner Dale, B. A.,	Pennsylvania.	John Clark.
Neraal, Paul O	North Dakota.	Faculty.
Packard, Chester Walter	Iowa.	W. M. Morton.
Pattison, Dilly Nelson	"	I. Pattison.
Pray, Gilbert Leroy	"	Faculty.
Robinson, James Wm.	"	H. C. Eschbach.
Scripture, James Levi	"	J. R. Guthrie.
Smittle, Jacob Michael	"	J. L. Lyons.
Spencer, Harry D.	"	W. W. Beam.
Starr, Orris Ferry	"	F. W. Cram.
Stull, William Hawkins	"	J. C. Shrader.
Swensson, John Gustaf	Illinois.	W. D. Middleton.
Townsend, William Harold	Iowa.	C. H. Churchill.
Van Epps, Clarence, B. S.	Iowa.	L. W. Littig.
Vorwerk, Anthony H.	"	E. E. Kirkendal.
Whitacre, John Charles	"	Faculty.
Whitehead, Herman Joseph	"	T. C. Brady.
Williams, Dell E.	"	M. B. Voldeng.
Williams, George Edgar	"	H. A. Gilman.
Wilson, Maurice Edward, D. V. M.,	Iowa.	E. B. Myrick.

NAME.	RESIDENCE.	PRECEPTOR.
Wilson, Elsworth, D. V. M.	Iowa.	J. S. and R. S. Watts.
Wright, Walter Nelson	"	Faculty.
Wyckoff, George Lewis	"	R. T. Jewell.

JUNIOR CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Abegg, Henry Hervy	Iowa.	A. K. Berry.
Allen, Frank Hervy	"	G. H. Cassidy.
Anderson, Carl Ali	"	Faculty.
Anderson, Frederick Eugene	"	W. D. Middleton.
Arent, Asaph	"	Francis E. Seymour.
Baird, Jay	"	O. C. Baird.
Bauer, William John	"	E. N. Brown.
Besore, Walter McKay	"	J. E. Conn.
Besser, Emil, D. V. S.,	"	C. E. Thomas and J. Payne.
Bean, Oley G.	"	S. J. Nelson.
Blake, Charles Wesley	"	W. M. Young.
Bowen, Jesse William	"	L. W. Littig.
Briggs, Walter Homer, B. D.,	"	Faculty.
Brownell, William Flockton	"	Faculty.
Bursma, Jacob	Michigan.	Faculty.
Campbell, Charles Harvey	Nebraska.	S. O. Whaley.
Davies, James Eugene	Iowa.	W. H. Davis.
Dwelle, Elmer Hinman	"	C. A. Mund.
Edmonds, Charles Walton	"	G. H. Mammen.
Ely, Francis Argyle	"	D. D. and R. R. Davisson.
Engle, Harry Perry	"	Perry Engle.
Farrell, Albert Martin	"	F. E. Seymour.
Ferry, Addison Moody	"	Faculty.
Fitz, George G.	"	Faculty.
Frank, George	"	Charles Burwald.
Gardner, John Raphal	"	Faculty.
Gilkes, William	"	Faculty.
Graeser, Henry Bernard	"	B. N. Graeser.
Habenicht, Robert H.	"	Faculty.

NAME.	RESIDENCE.	PRECEPTOR.
Homer, Herman Corwin	Iowa.	L. E. Eslick.
Hovenden, John Henry	"	L. H. Jones.
Hoxie, Will E	"	D. G. Hoxie and J.W. Harriman.
Hull, Henry Clay, A. B.,	"	J. H. Hull.
Hull, John Franklin	"	J. C. Shrader.
Jorgenson, Palle Peder Maurius	"	James Murphy.
Kearny, Charles Atwell	"	A. H. Blocklinger.
Kelling, Louis Francis	"	Faculty.
Kirkland, Benjamin Franklin	"	R. T. Jewell.
Knudson, Becker Christian	"	R. J. Nestor.
Lambert, Fred Ernest	"	A. J. Hobson.
Lewis, Charles Ball	"	C. G. Lewis.
McClintock, John T., B. A.,	"	R. E. Conniff.
McIntosh, Drusie	"	A. D. King.
Mecum, John Warren	Wisconsin.	Faculty.
Morgans, Samuel Lewis	Iowa.	M. H. Waplis.
Moulton, Milo Willie	"	A. M. Avery.
Nass, Hildus Augustinus	"	E. H. Williams.
Noe, Charles Fred	"	C. J. Winzenried.
Parker, William Gilman	Oregon.	A. W. and C. S. Bowman.
Pence, Lawrence Waldo, B. D.,	Iowa.	N. W. Phillips.
Peters, James Alphonsus	"	James Murphy.
Petersmeyer, William	"	F. S. Johnson.
Purcell, Bert	"	C. S. Chase and H. P. Duffield.
Proudfoot, Charles Paris	"	J. D. McCleary.
Replogle, John Alan	"	Faculty.
Richards, James Weldin	"	J. W. Morgan.
Rogers, Henry Courtland	"	Geo. Inglis.
Rogers, Claude Bernard	"	R. A. Rogers.
Sackett, Claude Conwell	"	A. K. Berry.
Simpson, Charles E.	"	M. W. Hill.
Snyder, John Franklin	"	S. R. Cook.
Sollenbarger, George Hartly	"	D. D. Drennan.
Spiller, Oscar Calvin Henry, Ph.B.,	Texas.	— Watson.
Stanford, Walter	Iowa.	Faculty.
Stanton, James	"	L. B. Oliver.

NAME.	RESIDENCE.	PRECEPTOR.
Thielen, Michael H., M. D. I.,	Iowa.	Faculty.
Thornton, Albert	"	W. W. Beam.
Walker, James	"	Faculty.
Walker, Frederick Earl	"	J. L. Augustine.
West, Hugh Hamilton	"	J. D. Horton.
Willsey, Frank Brown	Illinois.	Faculty.
Wright, Charles Edward	Iowa	C. C. Smead.
Wyland, George Van	"	Faculty.

SOPHOMORE CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Macy, Otto E.	Iowa.	J. P. Mullin.
Sigworth, Harry W.	"	H. W. Sigworth.

FRESHMAN CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Adams, Ortus Fuller	Iowa.	Faculty.
Augustine, Grant	"	J. L. Augustine.
Bachman, Morris Piper	"	J. L. Heries.
Barker, Archie	"	C. C. Heady.
Binford, William Sherwood	"	G. W. Padgham.
Bowes, John Joseph	"	T. J. O'Toole.
Bright, Henry F.	"	C. E. Leithead.
Brown, Hadley Cyprian	"	Faculty.
Clarke, Orson Whitney	"	O. Clarke.
Cook, Jesse Lee	"	F. E. Cook.
Copeland, John Albert	"	Faculty.
Corsaut, James	"	W. S. Burrows.
Creel, James Cleon	"	J. W. Lander.
Deters, Willie August	Minnesota.	Faculty.
Dorsey, Michael Francis	Iowa.	Faculty.
Dotson, Eli E.	"	J. K. Milbourne.
Felt, Roland A.	"	Faculty.
Freeman, John Peter	"	C. A. Hurd.
George, Abel Benson	"	A. Carson.

NAME.	RESIDENCE.	PRECEPTOR.
Gillam, William Newton	Iowa.	C. C. Griffin.
Gray, Howard D.	"	P. Engle.
Greenlee, Clyde Vernie	"	E. J. Howard.
Harold, Arthur William	"	O. P. Hanson.
Hawthorne, Robert Acheson	"	Faculty.
Henderson, Archibald G.	"	Faculty.
Hildreth, Herman Lee	"	J. E. and E. L. Gilmore.
Hohenschuh, Frank Adam	"	Faculty.
Hoyt, Benjamin Franklin	Wisconsin.	J. Simonson.
Ickes, Lawrence James	Iowa.	A. W. Bowman.
Lamerton, William Edward	"	F. Horton.
Luehrsmann, Barney	"	Faculty.
Magana, Tobias	Mexico.	Faculty.
McCloskey, Thomas John	Iowa.	J. R. Guthrie.
McFall, Edward Augustus	"	Faculty.
Meis, Edward William	"	N. J. A. Mueller.
Meyhaus, John Henry	"	A. L. Hageboeck.
Morris, Thomas Boyd	"	Faculty.
Neff, Mary Lawson, A. B.,	"	Faculty.
Newell, William Carl	"	W. Abegg.
Osborn, Claude Fenton	"	Faculty.
Ostrom, Louis, Jr.,	Illinois.	Faculty.
Parsons, Stephen Tyler	Iowa.	A. Folsom.
Patterson, William Edward	"	Faculty.
Payne, Rollo O.	"	Faculty.
Phillips, Isaac Hildreth	"	C. A. Abbott.
Reiter, Alfred E.	"	H. F. Steinle.
Rice, Perry Flint	Illinois.	Faculty.
Roberts, Ernest Eugene	Iowa.	J. W. Lander.
Rowe, Frank Noyes	"	Faculty.
Sargent, Frank Loring	"	G. E. Fullerton.
Schell, Ida Leonora	"	Faculty.
Schroeder, Henry A.	"	A. L. Hageboeck.
Sears, George L.	"	Faculty.
Sigworth, Fred Byers	"	H. W. Sigworth.
Smith, Cecil Ephraim	England.	Faculty.

NAME.	RESIDENCE.	PRECEPTOR.
Smith, Ralph Thaddeus	Iowa.	M. N. McNaughton.
Speirs, George Omar	Illinois.	Faculty.
Stuart, Percy Ernest	Iowa.	A. W. Adair.
Thompson, James Raymond	"	A. J. Laird.
Tilden, Charles George	"	A. Richmond.
Torney, Samuel James	Iowa.	Faculty.
Tourtellot, Lewis Jamison	"	G. W. Kirkpatrick.
Van Gorden, Deland	"	J. C. Davies.
Von Gundlach, Erich	Wisconsin.	E. J. Tiedemann.
Wagner, George Alexander	Iowa.	M. M. Meredith.
Warner, Herbert W.	"	J. L. and F. W. Powers.
Weir, Edward C.	"	A. Weaver.
Williams, Edward B.	"	Faculty.
York, Nathan Albert	"	Faculty.

GRADUATE STUDENT.

Kenefick, Michael J., M. D.,	Iowa.

SPECIAL STUDENTS.

Burge, Albertus Joseph,	Iowa.
Dow, Thomas Jefferson, B. D., A. B.,	"
Habenicht, Ida Adella,	"
Teeters, William John, B. S.,	"

HOMOEOPATHIC MEDICAL DEPARTMENT.

GRADUATE STUDENTS.

Samuel B. Hoskins, A. B., M. D.....Sioux City
Samuel N. Watson, A. M., M. D.....Iowa City

SENIOR CLASS.

NAME.	PRECEPTOR.	RESIDENCE.
Anderson, C. L., M. D.	Faculty,	Lees Summit, Mo.
Battin, James F.	E. D. Whitacre,	Iowa City
Bywater, Wm. L.	C. M. Morford,	Toledo
Dun Van, Edgar K.	W. C. Cooke,	Moravia, N. Y.
Ebersole, Sarah M.	R. Barton,	Manson
Fry, Arminda C.	I. H. Fry,	Marshalltown
Hansen, Jorgen W.	A. Shantz-Hansen,	Cedar Falls
Hazard, Clara M.	T. L. Hazard,	Iowa City
Kauffman, Frank E.	J. H. Crippen,	Waterloo
Lillie, Bertha S.	Geo. Royal,	Marion
Marvin, Harvey W.	H. W. Marvin,	Sioux City
Peck, Raymond E.	J. W. Watzek,	Davenport
Seems, Gaillard F.	T. Seems,	Mitchelville
Semones, Wm. M.	J. G. Gilchrist,	Iowa City
Speaker, Everett E.	C. M. Morford,	Toledo
Struble, Linton W.	T. L. Hazard,	Iowa City
Taylor, Morrison A.	C. H. Barette,	Clarksville
Westonberger, J. C.	S. Johnson,	Grafton

JUNIOR CLASS.

NAME.	PRECEPTOR.	RESIDENCE.
Bailey, Ida H.	J. G. Gilchrist,	Iowa City
Farnum, Earl P.	A. T. Huxley,	Mason City
Kauffman, Wm. A.	C. M. Morford,	Whitton
Lambert, Elmer J .	J. C. Bonham,	Ottumwa

NAME.	PRECEPTOR.	RESIDENCE.
Miller, Lucas A.	J. G. Gilchrist,	Iowa City
Sarchett, Lloyd H.	F. L. Tribon,	Algona
Skinner, Fred C.	F. D. Paul,	Rock Island, Ill.
Todd, Victor C.	S. N. McLean,	Washington
Wood, G. B.	F. A. Seeman,	Dubuque.

SOPHOMORE CLASS.

NAME.	PRECEPTOR.	RESIDENCE.
Abbott, Ed. C.	J. G. Gilchrist,	Iowa City
Blackstone, B. P.	A. L. Pollard,	Anamosa
Calkins, Fred E.	R. W. Calkins,	Clarks, Neb.
Carver, H. E.	Faculty,	Oskaloosa
Davis, Metta E.	C. B. Adams,	Sac City
Day, Henry L.	P. E. Triem,	Manchester
Marble, Pearl L.	Thos. Phillips,	Raymond
McCabe, Fordyce	A. C. McAllister,	Muscatine
Metzinger, John J.	Faculty,	Iowa City
Moulton, Horace	C. W. Smith,	Maquoketa
Mulckey, Carl	A. E. Holloway,	Knoxville
Pittinger, Fred A.	H. P. Ustick,	Boise City, Idaho
Ruggles, C. P.	Faculty,	Milton, Mass.
Unkrich, C. Rudy,	W. H. Connor,	Fairfield
Young, Glyndon A.	J. Hermann,	Sioux City

FRESHMAN CLASS.

NAME.	PRECEPTOR.	RESIDENCE.
Alexander, J. L.	Drs. Morhead Muirhead,	Marion
Bickley, W. H.	Drs. Bickley,	Waterloo
Bowen, C. A.	A. Zolner,	West Union
Barton, E. G.	Faculty,	Mt. Pleasant
Carmichael, E.	J. G. Gilchrist,	Richland
Coddington, J. K.	Faculty,	Princton, Ills.
Eilers, P.	W. A. Mirrick,	Monticello
Eckman, G. A. (Partial course.)	Faculty,	Cambridgeport, Mass.
Hill, Alice L.	J. G. Gilchrist,	Epworth

NAME.	PRECEPTOR.	RESIDENCE.
Hoskins, J. B.	S. B. Hoskins,	Sioux City
Johnstone, J. U,	F. A. Strawbridge,	Sigourney
Kemp, E. H.	C. M. Morford,	Toledo
Laird, J. W.	Faculty,	Mt. Pleasant
Lenz, J. G.	J. G. Gilchrist,	Cedar Rapids
Linn, W. N.	A. M. Linn,	Jewell, N. Dak.
McGarvey, Anna M.	J. L. Vandervere,	Blue Grass
Melton, E. A.	A. T. Cockrun,	Afton
Mitchell, F.	B. A. Wilder,	Sibley
Palmer, Fannie A. (Partial course.)	G. W. Palmer,	West Branch
Rorabaugh, W. E.	Geo. Royal,	Des Moines
Schenck, E.	F. C. Sage,	Waterloo
Seeman, C. A.	G. V. Ellis,	Akron
Tucker, F. A.	I. H. Fry,	Marshalltown
Waterbury, C. A.	Drs. Bickley,	Waterloo
Winters, Rose De L.	J. G. Gilchrist,	Epworth

NURSES.

SENIOR.

Gertrude A. Turner, Head Nurse,	Emmettsburg
Jensen, Celia, A.	Osage
Raff, Mary A.	Maquoketa

JUNIOR.

Graves, Sara L.	Dubuque
Hawkins, Alice	Des Moines

PUPIL.

Farrington, Minnie M.	Iowa City
Gardner, Roxana G.	Iowa City
Lewis, Lizzie J.	Iowa City
Melton, Mrs. E. A.	Afton
Smith, Carrie E.	Iowa City
Williamson, Elizabeth	Iowa City

DENTAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.
Anderson, Arthur Lewis	Estherville.
Baughman, George P.	Griswold.
Blanchard, Frederick Channing	Nashua.
Boos, Caspar Milton Baltis	Manning.
Burns, E. L.	Kensett.
Clark, George Edward	Galesburg, Ill.
Conn, Frank	Cedar Rapids,
Dodge, Clarence A.	Burlington.
Donlon, Joseph Patrick	Elkader.
Fox, Charles Sumner	Meriden, Conn.
Griffin, Festus Manfred	Missoula, Mon.
Hasek, Wesley Oudrey	Cedar Rapids.
Holland, Frank Elmer	Afton.
Horton, Fred Willis	Iowa City.
Hough, Norman Hamlin	Muscatine.
James, Frank Boynton	Iowa City.
Jones, Harry Carson	Des Moines.
Jones, John Milton	Iowa City.
Kearns, Charles Randolph	Lincoln, Nebr.
Kennedy, Elmer Francis	Cherokee.
Leggett, William B.	Marcus.
Leonard, George Rowe	Mandan, S. D.
Lotts, Ernest George	Independence.
Maytum, Burlington J.	Warsaw.
Morrow, Henry, Jr.	Iowa City.
Mueller, Adam Joseph	Iowa City.
Renshaw, Carroll Wheaton	Rock Valley.
Riser, Gustavus E.	Ft. Madison.

NAME.	RESIDENCE.
Scroggs, Richard Erskine	Indianola.
Secor, Alson	Forest City.
Silvis, John Chauncey	Rock Island.
Smith, F. Potter	York, Nebr.
Smith, Ray	Mitchell, S. D.
Toney, Samuel Breese	Chicago, Ill.
Wilcox, Charles S.	Elgin, Ill.

JUNIOR CLASS.

NAME.	RESIDENCE.
Barrera, Isaac	Mondova, Mexico.
Barry, Joseph Edward	Dyersville.
Beam, Frank N.	Malvern.
Bingham, Frederick Nathaniel	Des Moines.
Bradley, William Oscar	Dubuque.
Brock, Herbert Bruce	Iowa City.
Brooks, George	Greenfield.
Brown, Sim Chauncey	Eddyville.
Brown, Curtis Henry	Belle Plaine.
Calhoun, Joseph Farrar	Birmingham.
Crandall, Walter G.	Spencer.
Crowley, Thomas Edward	Grundy Center.
Countryman, Charles Clarence	Birmingham.
Davis, John M.	Aledo, Ill.
Davis, Walter A.	Aledo, Ill.
Darnell, George Washington	Randalia.
Daugherty, James Bertis	La Moine, Ill.
Decker, Herbert M.	Davenport.
Deetkin, Julius Charles	Council Bluffs.
Dillinger, Hanna	Glidden.
Eaton, Carroll Reawick	Strawberry Point.
Eickelberg, George C.	Iowa City.
Eicher, Cora	Ainsworth, Nebr.
Fawkes, Charles James	Dubuque.
Fickes, Josiah Barton	Iowa City.

NAME.	RESIDENCE.
Fowle, Leo G.	Iowa City.
Frear, Charles Rufus	Sloan.
Freyman, Frank	Dyersville.
Furry, James Harry	Mt. Auburn.
Gary, Arthur George	Rush, Penn.
Gay, John Charles	Conesville.
Grafton, Charles W.	Rockwood.
Godlove, George W.	Riverside.
Hackett, John Vincent	Creston.
Hall, Robert W.	Cherokee.
Hayes, Clinton LeGrande	La Porte.
Hammons, Robert Walter	Parsons, Kas.
Haley, Frank Richardson	Rock Island, Ill.
Henle, Mathias Francis	Clinton.
Hibbard, Clark D.	Yankton, S. D.
Hinus, Jennie	Princeton, Mo.
Hixon, Charles L.	Holton, Kas.
Hollenbeck, Charles Dighton	Cedar Rapids.
Hood, Guerne Tuttle	Glidden.
Hope, Bird Norris	Birmingham.
Hogan, Edward Michael	Adair.
Johnson, Frank Alexander	Holsteen.
Joslin, Walter Nich.	Moline, Ill.
Keeler, Howard Denton	Des Moines.
Kinsley, Jason Daniel	McGregor.
Kulp, David Evans	Grundy Center.
Lanning, George Richard	Washington.
Lambert, Nella	Sheridan, Wy.
Lawton, Ernest John	North Freedom.
Lawrence, William Henry	Union.
Leech, Charles Sloan	Winterset.
Leigh, Charles Lloyd	Dubuque.
Lillibridge, William Otis	Akron.
Lindsay, Clayton Burns	Waucoma.
McKee, J. W.	Davenport.
McClelland, Fay	Cedar Rapids.

NAME.	RESIDENCE.
McClanahan, William B.	Corydon.
Meis, Herman J.	Dyersville.
Miller, Thomas Jefferson	Hull.
Miller, William C.	Amish.
Morrow, Burton Allen	Larrabee.
Ogg, Mahlon D.	Greenleafton, Minn.
Oldaker, Leroy	Frendale.
Patton, Jefferson Hollister	Des Moines.
Penney, Clarence Lee	Stacyville.
Quinn, Guy Richard	Vinton.
Reynard, May	Burlington.
Reupke, Alvin Carter	Davenport.
Rice, James Kuelon	Cherokee.
Rundorff, Arthur Henry	Burlington.
Sensibaugh, William Chandler	Mt. Pleasant.
Siverly, Edward	Lone Tree.
Smith, Arthur T.	Bellevue.
Specht, Eugene Henry	McGregor.
Starbuck, Adelbert W.	Hebron.
Sutton, Harry Burse	Corydon.
Teter, Joseph Henry	Belington, W. Va.
Torrance, Charles Anderson	Maryville, Mo.
Truax, Fred Elmer	Maquoketa.
Watland, Albert	New Sharon.
Webb, John Everett	McGregor.
Weckert, William Henry	Fairfield.
Westcott, Harry	Iowa City.
Welk, Frank Paine	Fairfield.
Weymouth, Ida	Iowa City.
White, Leonard Alwyn	Iowa City.
Wood, George L.	Geneseo, Ill.

FRESHMAN CLASS.

NAME.	RESIDENCE.
Alderson, Thomas E.	Dubuque.
Albright, Leroy Clark	Primghar.
Bacon, Alexander Porter	Iowa City.
Baker, Harry Clark	Everly.
Barnard, Leslie Orvil	Luther.
Baumer, John	Iowa City.
Beaumont, Francis Hugh	Mt. Pleasant.
Benson, Piny Fay	Columbus Junct'n.
Booth, John Jacob	Marion.
Bradshaw, Wayland C.	Jefferson.
Browning, Ernest Welcomb	Solon.
Brock, Miles Warren	Iowa City.
Bruce, Guy Rolfe	Dubuque.
Dabney, Harry Benton	Oakland.
Davis, John Clarence	Mt. Vernon.
Dewell, Wells	Magnolia.
Dudley, Dud R.	Lamoni.
Gardner, H. H.	Iowa City.
Gilman, Don Cameron	Colfax.
Gray, Lewis Ballou	Bancroft.
Grigsby, Fred Redman	Blandinsville, Ill.
Henak, Edwin A.	Oxford.
Hora, Josie	Oxford Junction.
Johnson, Oliver	Cedar Falls.
Keeler, Clark C.	Des Moines.
Kelly, William Allan	Afton.
Kern, F. J.	Burlington.
Lockhart, Will T.	Mediapolis.
Long, John Edwin	Mt. Pleasant.
Lowry, William David	Davenport.
McCarrille, Maurice Francis	Madison, Wis.
McGarvey, Lovelace Edwin	Davenport.
Mentzer, Charles	Marion.
Morris, Robert C.	Union.

NAME.	RESIDENCE.
Osborn, John Culbertson	Denison.
Oyler, William Seward	Downey.
Page, Robert Roy	Iowa City.
Pray, Charles H.	Vinton.
Ridenour, Judson, Beeghly	Garrison.
Rienfried, Charles Joseph	Dubuque.
Roberts, Claire Willie	Mt. Pleasant.
Seydel, Samuel Jordon Kirkwood	Iowa City.
Stute, Fred Nicholas,	Lyle, Minn.
Stull, Claude	Algona.
Swain, Ada M.	Marengo.
Swisher, Arthur R.	Iowa City.
Tullis, Freeman	Ottumwa.
Tanner, Samuel H.	Iowa City.
Warner, Raymond Theodore	Parkersburg.
Williams, Ray	Oakland.
Willet, Raymond C.	Iowa City.
Willey, Harry Duane	Onawa.
Wilson, Wm. Howard	Pottsdam, N. Y.
Welsh, James Donnell	New Albin.

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Barry, Joseph Edward	Dyersville.
Brown, Curtis Henry	Belle Plaine.
Deetken, Julius Charles	Council Bluffs.
Dillinger, Hannah	Glidden.
Freyman, Frank	Dyersville.
Godlove, George W.	Riverside.
Goodenough, George	Gowrie.
Haley, Frank R.	Rock Island, Ill.
Henle, Mathias Francis	Clinton.
Holland, Frank Elmer	Afton.
Leigh, Charles Lloyd	Dubuque.
Lillibridge, William Otis	Akron.
McClelland, Fay	Cedar Rapids.

NAME.	RESIDENCE.
Moore, Rolland B.	Iowa City.
Mueller, Adam	Iowa City.
Oldaker, Leary	Frendale.
Penney, Clarence Lee	Stacyville.
Reupke, Alvin C.	Davenport.
Rundorff, Arthur H.	Burlington.
Westcott, Harry	Iowa City.

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Fox, Charles Sumner, D. D. S.	Meriden, Conn.
Maytum, Burlington, D. D. S.	Warsaw.

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NAME.	RESIDENCE.
Cooper, Zada Mary	Quasqueton.
Cozine, Irvin Vernon	Iowa City.
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Highley, Larry Edward	Whitewood, S. D.
Koch, August Frank	Amana.
Lafrenz, Henry Theodore	Davenport.
Magee, Edward Washington	Dunkerton.
Marks, Charles Rollin	Davenport.
McCray, Walter Robert	Marble Rock.
McGlone, Agnes	Independence.
McMahon, Thomas	Victor.
Mead, Nehemiah Paul	Akron.
Novak, Joe H.	Iowa City.
Packwood, Flemion Bert	Oskaloosa.
Reynolds, Lillie Ethel	Brayton.
Sprecher, George	Denison.
Van den Berg, Albert *	Alton.
Watters, William Leslie	Atalissa.

JUNIOR CLASS.

NAME.	RESIDENCE.
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Bernhart, J. C.	Des Moines.
Brinton, Gilbert Edward	Brighton.
Cobbs, Milton Henry	Plover.
Conry, William Le Roy	Waterloo.
Corr, Edward	Sloan.

* Deceased.

NAME.	RESIDENCE.
Clark, James Albert	Woodbine.
Elliott, Henry Russell	West Liberty.
Farrand, Bert Elvin	Sumner.
Faris, Albert Samuel	Morning Sun.
Gearhart, John Carson	Monticello
Gearhart, Newton A.	Hopkinton.
Gossman, Andrew F.	Iowa City.
Greiner, Lawrence Franklin	Blairsburg.
Hinchman, Carl Boyer	Red Oak.
Jones, David Ambrose	Williamsburg.
Landsberg, Will Edward	Iowa City.
McFerrin, Marion Rose	College Springs.
McLaughlin, Clell J.	Monticello.
McGrew, L. Warner	Emerson.
Mercer, Kline Miller	Burlington.
Munson, Charles Hoyle	Carroll.
Nixon, Robert Burns	Shambaugh.
Owens, David Austin	Cresco.
Park, Charles Grant	Wilton Junction.
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Philipp, August Charles	Earlville.
Pohle, Edwin Brainard	Dexter.
Prader, Dolph C.	Monticello.
Roberts, Arthur Addison	Canton, Mo.
Royer, John Delbert	Hampton.
Scheu, Louis Charles	Stacyville.
Sigworth, M, Perry	Anamosa.
Southward, Harry A.	New Boston, Ill.
Spear, Benjamin Irving	Stanwood.
Steffen, Ruthford Burchard	Storm Lake.
Strayer, Lucile Irene	Waterloo.
Tague, Marion Samuel	Likens.
Tisdale, William Henry	State Center.
Ward, Joseph John	Iowa City.
White, Louis Mortimore	Maynard.
Wiese, Rudolph	Manning.

SUMMARY.

COLLEGIATE DEPARTMENT:

Graduate Students	98	
Seniors	83	
Juniors	82	
Sophomores	133	
Freshmen	206	
Special	42	644

LAW DEPARTMENT:

Seniors	87	
Juniors	128	215

MEDICAL DEPARTMENT:

Graduate Students	1	
Seniors	65	
Juniors	73	
Sophomores	2	
Freshmen	69	
Special	4	214

HOMŒOPATHIC MEDICAL DEPARTMENT:

Graduate Students	2	
Seniors	18	
Juniors	9	
Sophomores	15	
Freshmen	25	69

DENTAL DEPARTMENT:

Seniors	35	
Juniors	92	
Freshmen	57	184

PHARMACY DEPARTMENT:

Seniors	19	
Juniors	43	62
		1388
Deduct for names counted twice		57
		1331

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1897-98

CATALOGUE

OF THE

State University of Iowa

IOWA CITY, IOWA

1897-98

AND

ANNOUNCEMENT FOR 1898-99

PUBLISHED BY THE UNIVERSITY
1898

Calendar for 1898-9.

1898.

June 3, Friday.—Anniversary of Literary Societies, 8 P. M.

June 5, Sunday.—Baccalaureate Address, 4 P. M.

June 6, Monday.—Class Day Exercises.

Battalion Drill and Dress Parade, 4 P. M.

June 7, Tuesday.—Alumni Day.

Alumni Meeting, 2 P. M.

Alumni Dinner, 6 P. M.

June 8, Wednesday.—Graduating Exercises, Law Department, 10 A. M.

June 9, Thursday.—Graduating Exercises, Collegiate Department, 10 A. M.

September 13, Tuesday.—Examinations for Admission.

September 14, Wednesday.—Fall Term begins, all Departments.

November 24, Thursday.—Thanksgiving Holiday.

December 22, Thursday.—Fall Term ends.

1899.

January 4, Wednesday.—Winter Term begins.

March 23, Thursday.—Winter Term ends.

March 27, Monday.—Graduating Exercises, Dental Department.

March 28, Tuesday.—Spring Term begins.

March 28, Tuesday.—Graduating Exercises, Homœopathic Medical Department.

March 29, Wednesday.—Graduating Exercises, Medical and Pharmacy Departments.

June 2, Friday.—Anniversary of Literary Societies, 8 P. M.

June 4, Sunday.—Baccalaureate Address, 4 P. M.

June 5, Monday.—Class Day Exercises.

Battalion Drill and Dress Parade, 4 P. M.

June 6, Tuesday.—Alumni Day.

Alumni Meeting, 2 P. M.

Alumni Dinner, 6 P. M.

June 7, Wednesday.—Graduating Exercises, Law Department, 10 A. M.

June 8, Thursday.—Graduating Exercises, Collegiate Department, 10 A. M.

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Demonstrator of Pathology and Bacteriology, Medical Department.

State University of Iowa.

Organization.

In the year 1840, the Congress of the United States passed an act setting apart two townships for the use and support of a University within the Territory of Iowa, whenever it should become a State. The gift was accepted, as set forth in the Constitution of the State, and the policy re-affirmed in the amended Constitution of 1857. In the latter document it is moreover specifically stated that the "General Assembly shall encourage by all suitable means the promotion of intellectual, scientific, moral, and agricultural improvement."

The first General Assembly took action in regard to the location of the University, and a Board of Trustees was appointed. Very little, however, was accomplished until 1855, when the institution was first opened for the reception of students. The University was subsequently re-organized, and under the new organization re-opened on September 19, 1860, and this may fairly be regarded as the date of the beginning of the existing institution.

The control of the University is entrusted to a Board of Regents, consisting of the Governor of the State and the Superintendent of Public Instruction, *ex-officiis*, and one member from each Congressional District, who are elected by the General Assembly.

The University comprises the following departments:

1. COLLEGIATE DEPARTMENT.
2. LAW DEPARTMENT.
3. MEDICAL DEPARTMENT.
4. HOMŒOPATHIC MEDICAL DEPARTMENT.
5. DENTAL DEPARTMENT.
6. PHARMACY DEPARTMENT.

Collegiate Department.

Faculty and Instructors.

CHARLES ASHMEAD SCHAEFFER, A. M., PH. D., LL. D.,
President.

AMOS NOYES CURRIER, A. M., LL. D.,
Professor of Latin Language and Literature, and Dean of the Faculty.

SAMUEL CALVIN, A. M., PH. D.,
Professor of Geology.

THOMAS HUSTON MACBRIDE, A. M., PH. D.,
Professor of Botany.

LAUNCELOT WINCHESTER ANDREWS, PH. D.,
Professor of Chemistry.

GEORGE THOMAS WHITE PATRICK, PH. D.,
Professor of Philosophy.

CHARLES BUNDY WILSON, A. M.,
Professor of German Language and Literature, and Secretary of the Faculty.

ANDREW ANDERSON VEBLEN, A. M.,
Professor of Physics.

LAENAS GIFFORD WELD, A. M.,
Professor of Mathematics.

CHARLES CLEVELAND NUTTING, A. M.,
Professor of Zoology.

ISAAC ALTHAUS LOOS, A. M.,
Professor of Political Science.

JOSEPH JASPER MCCONNELL, A. M.,
Professor of Pedagogy.

WILLIAM CRAIG WILCOX, A. M.,
Professor of History.

FREDERIC C. L. VAN STEENDEREN, A. M.,
Professor of French Language and Literature.

ALFRED VARLEY SIMS, C. E.,
Professor of Civil Engineering.

HANSON E. ELY, 2nd Lieutenant 17th Infantry, U. S. A.
Professor of Military Science and Tactics.

GILBERT L. HOUSER, M. S.,
Professor of Animal Morphology and Physiology.

BENJAMIN FRANKLIN SHAMBAUGH, A. M., PH. D.,
Professor of Government and Administration.

WILLIAM PETERS REEVES, PH. D.,
Professor of English Language and Literature.

LEONA ANGELINE CALL, A. M.,
Assistant Professor in charge of Greek Language and Literature.

CHARLES SCOTT MAGOWAN, A. M., C. E.,
Assistant Professor of Civil Engineering.

BOHUMIL SHIMEK, C. E.,
Assistant Professor of Botany and Curator of the Herbarium.

HENRY F. WICKHAM, M. S.,
Assistant Professor of Zoology, and Assistant Curator of the Museum.

ARTHUR G. SMITH, A. M.,
Assistant Professor of Mathematics.

FRANKLIN HAZEN POTTER, A. M.,
Assistant Professor of Latin.

CARL E. SEASHORE, PH. D.,
Assistant Professor of Philosophy.

W. J. MCGEE, A. M.,
Lecturer on Anthropology.

H. FOSTER BAIN, M. S., PH. D.,
Lecturer on Economic Geology.

PAULINE KIMBALL PARTRIDGE,
Instructor in Elocution.

FREDERIC BERNARD STURM, A. B.,
Instructor in German.

PERCY HARGREAVES WALKER, M. S.,
Instructor in Chemistry.

GEORGE CRAM COOK, A. B.,
Instructor in English.

GEORGE N. BAUER, B. S.,
Instructor in Mathematics.

HARRY GRANT PLUM, A. M.,
Instructor in History.

CHARLES HENRY BOWMAN, B. PH.,
Instructor in Physics.

HERBERT C. DORCAS, B. PH.,
Instructor in Pedagogy.

LOUISE ELIZABETH HUGHES, A. M.,
Instructor in Latin.

FRED D. MERRITT, B. S.,
Instructor in Mathematics.

CARL SCHLENKER, A. B.,
Instructor in German.

HARRY EUGENE KELLY, A. M.,
Instructor in English.

SARAH DELIA HUTCHINSON, A. M.,
Instructor in French.

RUSSELL T. HARTMAN, B. S.,
Instructor in Civil Engineering.

LESTER T. JACKSON, A. B.,
Instructor in Chemistry.

C. H. VAN LAW, A. M.,
Instructor in Political Science.

ALBERTUS J. BURGE, B. S.,
Fellow in Animal Morphology and Physiology.

CHARLES FREDERICK LORENZ, B. S.,
Fellow in Physics.

THOMAS EDMUND SAVAGE, B. S.,
Fellow in Geology.

M. ROBERTA HOLMES, A. M.,
Fellow in Latin.

JOSEPH H. RIDGWAY,
Taxidermist.

GEORGE LYMAN GRIMES, B. S.,
Mechanician and Assistant in the Physical Laboratory.

MARY LAURA OTTO, B. PH.,
Assistant in Botany.

General Plan.

The Collegiate Department embraces four general courses of study,—one Classical, two Philosophical, and one General Scientific; and two technical courses,—Civil Engineering and Electrical Engineering.

By pursuing one of the four general courses, and devoting the time left open for elective studies to some one line, it is possible for the student to arrange a course which, besides furnishing the means of a broader culture, will more thoroughly fit him for teaching some particular specialty, or which will enable him to develop his tastes in that particular direction. Thus, for example, a student in the course in General Science may at the same time devote himself especially to chemistry, or physics, or mathematics and astronomy; a student in the Philosophical Course may also take a special course in ancient or modern languages, or in history. The members of the Faculty will always be glad to advise with students on this subject, and will cordially assist them in endeavoring to specialize their work to the best advantage.

Candidates for degrees are required to make an election of one of these courses, and will not be allowed, without permission, to change the elected course, nor to pursue less or more than three studies at a time, except as required by the program.

Students not candidates for graduation, on complying with the terms of admission, will be allowed to select their studies under the direction of the Faculty.

Persons over twenty-one years of age not candidates for a degree may be admitted to special studies, without examination, at the discretion of the Faculty.

Resident Graduates.—Graduates of this or other institutions desirous of prosecuting studies not included in their undergraduate course may, on consultation with the President, avail themselves of such facilities as the department affords.

Requirements for Admission.

Candidates for admission to the Freshmen Class in any of the Collegiate courses must be at least sixteen years of age, and must, by examination or by presenting acceptable certificates, furnish evidence of having completed the preparatory requirements.

No one will be admitted whose deficiencies exceed the equivalent of one study for one year; a *preparatory* credit is the equivalent of one study daily for a term of twelve weeks, on the basis of three studies a day in the preparatory schools. Candidates having deficiencies not exceeding this limit may be admitted *upon condition that they complete their preparation within the first year after admission.*

It is expected that the following work will be completed in the grammar school: Practical Arithmetic, Reading, Penmanship, Orthography, English Grammar, Geography, Book-keeping (single entry), Physiology, (the statutory requirements for primary and grammar schools), United States History (three terms' work), Civil Government (one term's work), Composition, (three terms' work), Drawing (three terms' work).

The work in Book-keeping, Composition, Drawing, and Civil Government is not to be considered as absolutely required, but only work in excess of the amount named in this paragraph will receive credit as preparatory work.

CLASSICAL COURSE.

GROUP I.—ANCIENT LANGUAGES.

1. **Latin.** Grammar, Cæsar, (four books), Cicero (four orations), Vergil (six books) with Prosody.

Instead of the prescribed Cæsar an equivalent amount of Viri Romæ or Nepos will be accepted and is recommended to the preparatory schools. In this case the remainder of the requirements may be offered

in Cæsar or Cicero. It is expected that three or four of the six required orations of Cicero (the Catiline orations being taken as the standard of length) will be read thoroughly and the remainder rapidly with a view to securing facility in translation. Equivalents in kind will be accepted for any part of the specified requirements. *An accurate and ready knowledge of grammatical forms and construction and a good vocabulary are of essential importance.* Sight reading should be taught and practiced from the first.

Exercise in writing Latin, based upon the current reading, ought to be carried through the *entire preparatory course.* An amount equivalent to Collar, Part III, is required for admission.

Four years of daily recitation are needed for the required preparation.

The Roman pronounciation is used in the University.

2. **Greek.** Grammar, Xenophon's Anabasis. As few high schools meet this requirement, the University for the present will provide means for fulfilling it, and an equivalent of three terms' work from Group IV may be offered.

The preparatory work in Greek should give thorough knowledge of grammatical forms, familiarity with the common rules of syntax and the ability to write simple Greek prose with correct accents. It is not expected that high school pupils under ordinary circumstances will be able, in a single year, to cover thoroughly the work required for admission.

GROUP II.—MATHEMATICS.

3. **Algebra.** The Algebra of the high school should comprise a careful study of the following topics: signs and symbols; fundamental operations; factoring (including lowest common multiple and highest common divisor); fractions; simple and quadratic equations; theory of exponents (including negative and fractional exponents and radicals); progression. Especial attention should be given to such salient points as the significance of the minus sign, factoring, theory of exponents, equations, and the ability to state readily algebraic problems. The interpretation of algebraic results with the graphical method of their representation should be introduced at the earliest possible stage and constantly insisted upon.

4. Geometry. Both plane and solid geometry are required. The "Heuristic" method in beginning the study of geometry is strongly recommended (See Hopkins' Manual of Plane Geometry, D. C. Heath & Co., and Spencer's Inventional Geometry, D. Appleton & Co.)

Whatever method is used the pupil should be provided with adequate drawing instruments and should construct and verify all of his propositions and theorems. Geometric processes and results should be expressed by algebraic symbols whenever possible. Original investigations should not simply be encouraged, but should be insisted upon as a matter of course. The eminently practical side of the study of geometry should not be lost sight of, but the work should be so arranged that it may be of the highest disciplinary value. The language of all geometrical exercises should be exact.

Arithmetic. The work in arithmetic should in general be completed in the grammar grades. At least one term's work in arithmetic may be done with great profit in the high school after the completion of the required work in algebra and geometry. Not only will a general view of the subject be found beneficial in itself, but the higher point of view now attainable may be taken advantage of in many ways which it is not necessary to enumerate.

In the high school not less than one-fourth of the time for three years should be devoted to the work in algebra and geometry. It is desirable that the high school work in mathematics be not finished until the end of the course, in order that there may be no break in the continuity of the work between the high school and the University.

GROUP III.—ENGLISH AND HISTORY.

5. English Composition. All applicants for admission whether from accepted schools or not will be examined to test their ability to write clear and correct English. The applicant will be required to write an essay of not less than two hundred words upon a subject chosen by himself from a considerable number set before him. No applicant will be accepted who is deficient in spelling, punctuation, sentence and paragraph structure.

The teacher is reminded that the proper preparation for this part of the requirement is constant practice in writing, with careful correction

and revision of themes. A part of the time should be devoted to the formal study of rhetoric in any good text-book, such as Genung's Outlines of Rhetoric (Ginn & Co.), or Scott & Denney's Paragraph Writing (Allyn & Bacon).

6. English Literature. Throughout the high school course much attention should be paid to the study of literature, by which is meant not merely the study of a manual on the history of literature but a careful, sympathetic study of literature itself in the writings of representative authors. Entire masterpieces suited to the attainments of the class should form the basis of recitations and an equal amount of collateral reading should be assigned and written reports required.

During the last year of the course a good outline history of the literature should be used, such as Brooke's Primer of English Literature (The Macmillan Co.) or Pancoast's Introduction to English Literature (Holt & Co.) This should always, however, be subordinated to the study of the texts themselves. In the study of literature the student should be stimulated and trained not merely to read and enjoy but to analyze the style and to absorb the spirit and substance of an author.

The applicant will be expected to be familiar with all of the works in the following list or with their equivalents:

For 1898; Shakespere's Macbeth, Milton's Paradise Lost, Books I and II, the Sir Roger de Coverley Papers in the *Spectator*, Coleridge's Ancient Mariner, Carlyle's Essay on Burns, Shelley's Defence of Poetry, Burke's Speech on Conciliation with America, Lowell's Vision of Sir Launfal.

For 1899; Shakespere's As You Like It, Irving's Sketch Book, De Quincey's English Mail Coach, Scott's Marmion, Longfellow's Evangeline, George Eliot's Silas Marner, Tennyson's Idylls of the King.

7. History. At least four terms' work should be presented in history. The course of study and available text-books should be somewhat as follows: first and second terms, History of Greece (Oman, Smith, Cox or Myers) and Rome (Allen, Leighton, Smith or Myers); third term, History of England (Montgomery or Gardiner); fourth term, The History of the United States (Channing, Thomas, Fiske, Johnson, Montgomery or MacMaster) or Civil Government (Fiske's Civil Government or Andrews' Manual of the Constitution).

Instead of the first three terms' work in history indicated above, which is preferred, the University will accept for the present three terms' work in general history from one of the following text-books: Myers, Fisher, Freeman or Swinton.

GROUP IV.—ELECTIVE.

Three terms' work, and if Greek is not offered six terms' work, are to be selected in science or in a modern language.

8. Science. The subjects are arranged in the order of preference: physics, botany, physical geography, physiology, drawing or book-keeping, economics, chemistry, astronomy, zoology, geology.

Credit for entrance will not be allowed on these subjects for less than two terms in each, except that one, or one and one half terms, may be allowed in botany, physiology, physical geography, and drawing or book-keeping, and one term in astronomy, geology and economics. In no case should more than two sciences be taken up for consecutive study in a single year; and whenever possible three terms of consecutive work in one science are advised, especially in physics.

9. German. A full year in German may be indicated by Joynes-Meissner's German Grammar, Parts I and III, about fifty pages selected from Joynes' German Reader (D. C. Heath and Co.), all of Storm's Immensee (Henry Holt and Co.) and Riehl's Burg Neideck (Ginn and Co.)

10. French. Van Daell's Introduction to the French Language or Edgren's French Grammar, and Van Daell's Introduction to French Authors or Super's French Reader will be accepted as an equivalent of a year's work in French.

PHILOSOPHICAL A COURSE.

The requirements for admission to this course are the same as for the classical course, except that one year of German or French, or one year of additional science may be substituted for Greek as provided for in Group IV.

PHILOSOPHICAL B, SCIENTIFIC AND ENGINEERING COURSES.

Preparation in all respects the same as that offered for the Classical or Philosophical A courses will be accepted for the Philosophical B, Scientific and Engineering courses.

Twelve terms of work from Group IV will, however, be accepted in September, 1898, as a substitute for the prescribed work in ancient languages. The Latin preparation, entire, or in part, is in all cases preferred, but those who desire to offer substitutes for Latin are advised to make the following selection of studies: physics, one year; botany, physical geography, physiology, and drawing or book-keeping, one-half year each. The remaining six terms may be selected at the option of the candidates from the other subjects under Group IV; but it is urgently advised that those who do not present any Latin for admission should attain some proficiency in at least one modern language.

After 1898 two years' work in foreign language will be added to the absolute requirements for admission to either of the above courses and the elective group will be correspondingly diminished.

GENERAL OBSERVATIONS.

1. It is strongly advised that preparatory work be confined to few subjects and that they be so chosen that they form two or three groups of closely related subjects.

2. Preparatory credit will not be allowed for less than three terms' work in any foreign language.

3. Substitutes of real equivalents not affecting the absolute requirements respecting Latin, mathematics, English, and history, will be allowed for the purpose of adapting the University requirements to the means and needs of the several preparatory schools.

4. It is assumed that, under ordinary circumstances, four years in the high school will be devoted to meet the requirements for admission here prescribed.

5. Students who are admitted with conditions can make them up in the Iowa City Academy or under the direction of a private tutor approved by the Faculty.

ADMISSION BY CERTIFICATE.

The Board of Regents has adopted the following plan for the examination of high school pupils and for general high school inspection:

1. Any school may be placed upon the accredited list upon application of its principal or board of directors, provided the Collegiate Faculty of the University is satisfied as to its (*a*) course of study, (*b*) methods of teaching, (*c*) facilities for instruction.

2. The course of study of such schools must be adapted for fitting its graduates for one or more of the collegiate courses of the University, or it must be in the direct line of such preparation.

3. Whenever any accredited or other school requests it, its pupils may be examined by the University at a convenient time in any subject or subjects selected by the school authorities from the schedules of studies required for admission to the University, and each pupil will receive from the University a credit card for each subject passed.

4. The University shall provide for schools desiring the same, a syllabus of each of the subjects in which examination is to be taken.

5. All accredited schools shall be inspected at the pleasure of the University, the expense of the inspection to be borne by the University.

6. The authorities of accredited schools shall report annually to the University all changes made in the course of study and submit a list of names of the instructors employed in the high school, with subjects taught by each.

The following revised rules governing the accrediting of schools have been adopted by the Collegiate Faculty. These rules will be in force after 1898, and the attention of the authorities of accredited schools is called to the revised rules in order that they may have time to make such changes in their courses of study and in their plans of work as will enable them fully to conform to the rules.

RULES GOVERNING THE ACCREDITING OF HIGH SCHOOLS.

High schools meeting the following conditions may, at the option of the Collegiate Faculty, be accredited as making full preparation for one or more of the University courses:

1. The course of study must be not less than four years of thirty-six weeks each in length, following an elementary course not less than eight years in length.

2. The course of study must require of each pupil not more than four recitations daily.

3. The entire time of at least two teachers must be given to instruction in high school branches.

4. The quality of the instruction given and the character of the text-books used must be approved by the Faculty.

5. Schools seeking considerable credit in science must demonstrate their ability to do successful laboratory work.

6. Schools seeking considerable credit in history and English must give evidence of a special library equipment for these branches.

Private academies, seminaries, normal schools or other secondary schools meeting the conditions mentioned above, or their equivalent, may be accepted on the same basis as high schools.

Accredited Schools.

All candidates for admission to the Freshman class, who come from accredited schools, must furnish to the University certificates containing *specific statements as to the amount of work done in each study.* Blanks will be furnished for such certificates upon application to the President, and should be returned by September 1st.

After 1898 such revision of the list of schools herewith given will be made, as the rules for the accrediting of schools may require.

There are doubtless other schools which are entitled to places on one or other of these lists, but because they have not furnished the data necessary to enable the University authorities to come to a safe conclusion in regard to their proper places in the lists, or because they have not signified a desire to come into accredited relations with the University, they are for the present omitted, without prejudice.

The following schools have been accredited by the Collegiate Faculty of the University as making full preparation for one or more of the Courses of the Collegiate Department.

HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Atlantic,	C. M. Cole,	William Wilcox.
Boone,	Sara F. Rice,	Geo. I. Miller.

HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Burlington,	E. Poppe,	Chas. R. Shelton.
Cedar Falls,	Grace J. Norton,	O. J. Laylander.
Cedar Rapids,	Abbie S. Abbott,	J. T. Merrill.
Clinton,	E. L. Mason,	O. P. Bostwick.
Council Bluffs,	H. B. Hayden,	J. C. Hisey.
Creston,	T. R. Amlie,	O. E. French.
Davenport,	H. H. Roberts,	J. B. Young.
E. Des Moines,	E. H. White,	Amos Hiatt.
N. Des Moines,	W. N. Clifford,	F. A. Lacey.
W. Des Moines,	W. O. Riddell,	F. B. Cooper.
Dubuque,	F. L. Smart,	F. T. Oldt.
Fort Dodge,	Mary L. Huffman,	F. C. Wildes.
Fort Madison,	B. J. Barr,	C. W. Cruikshank.
Iowa City,	F. C. Ensign,	S. K. Stevenson.
Keokuk,	G. E. Marshall,	O. W. Weyer.
Marion,	Lizzie R. Marshall,	J. J. Dofflemeyer.
Marshalltown,	C. C. Carstens,	F. E. Willard.
Missouri Valley,	Emma C. DeGraff,	A. B. Warner.
Muscatine,	E. F. Schall,	F. M. Witter.
Oskaloosa,	O. E. Dixon,	O. C. Scott.
Red Oak,	Ira S. Condit,	W. F. Chevalier.
Sioux City,	W. H. Turnbull,	H. E. Kratz.
E. Waterloo,	Lydia Hinman,	F. J. Sessions.
W. Waterloo,	Amy Boggs,	S. H. Sheakley.
Webster City,	Laura Seals,	C. W. Martindale.
Ackley,		O. W. Maxwell.
Adel,		C. R. Aurner.
Albia,		H. C. Hollingsworth.
Algona,		N. Spencer.
Ames,		E. D. Y. Culbertson.
Anamosa,		A. Palmer.
Brooklyn,		Fred S. Robinson.
Carroll,		C. C. Magee.
Centerville,		F. E. King.
Charles City,		G. S. Dick.

HIGH SCHOOL.	SUPERINTENDENT.
Clarinda,	W. Bell.
Colfax,	D. M. Kelly.
Columbus Junction,	D. R. Michener.
Corning,	C. M. Thompson.
Cresco,	L. E. A. Ling.
Decorah,	E. A. Parks.
Denison,	H. V. Failor.
Eagle Grove,	J. G. Grundy.
Eldora,	W. A. Doron.
Emmetsburg,	H. E. Blackmar.
Estherville,	C. C. Stover.
Fairfield,	J. E. Williamson.
Forest City,	J. D. Stout.
Geneseo, Ill.,	M. F. Miller.
Glenwood,	J. L. Laird.
Greene,	J. Percival Huggett.
Greenfield,	F. E. Palmer.
Guthrie Center,	Adam Pickett.
Guthrie County,	L. M. Swindler.
Hamburg,	J. C. King.
Hampton,	G. A. Bateman.
Harlan,	A. W. Merrill.
Independence,	J. L. Buechele.
Iowa Falls,	L. Hezzelwood.
Jefferson,	L. B. Carlisle.
Knoxville,	S. J. Finley.
Le Mars,	E. N. Coleman.
Leon,	S. L. Darrah.
Manchester,	R. W. Wood.
Maquoketa,	C. C. Dudley.
Marengo,	C. H. Carson.
Mason City,	A. R. Sale.
McGregor,	F. N. Williams.
Moline, Ill.,	H. M. Slauson.
Montezuma,	Bruce Francis.
Mt. Ayr,	C. O. Carter.

HIGH SCHOOL.	SUPERINTENDENT
Mt. Pleasant,	J. F. Riggs.
New Hampton,	D. A. Thornburg.
Newton,	E. J. H. Beard.
Oelwein,	L. B. Moffett.
Osage,	George Chandler.
Osceola,	I. N. Beard.
Ottumwa,	A. W. Stuart.
Parkersburg,	W. F. Barr.
Perry,	A. L. Lyon.
Reinbeck,	J. L. Mishler.
Rockford,	J. C. Wilson.
Rock Rapids,	W. S. Wilson.
Sanborn,	R. B. Daniel.
Sheldon,	W. I. Simpson.
Shenandoah,	O. E. Smith.
Sibley,	B. T. Green.
Sigourney,	E. H. Griffin.
Spencer,	Carrie B. Parker.
Springdale,	S. B. Stonerook, Jr.
Storm Lake,	A. V. Storm.
Stuart,	G. W. Bryan.
Taylorville Tp., Taylorville, Ill.,	W. E. Andrews.
Tipton,	W. L. Etter.
Traer,	O. M. Elliott.
Villisca,	D. A. Knapp.
Vinton,	H. C. Waddle.
Washington,	G. H. Mullin.
Waukon,	E. L. Coffeen.
Waverly,	E. E. Blanchard.
West Liberty,	L. T. Hill.

OTHER SCHOOLS.	PRINCIPAL OR PRESIDENT.
Calhoun County Normal School,	P. C. Holdoegel.
Charles City College,	F. J. Hirsch.
Denison Normal School,	W. C. Van Ness.
Dexter Normal College,	A. G. Smith.

OTHER SCHOOLS.	PRINCIPAL OR PRESIDENT.
Epworth Seminary,	Frank G. Barnes.
Iowa City Academy,	W. A. Willis.
Washington Academy,	
Whittier College,	W. C. Pidgeon.
Wilton German-English College,	E. Mannholdt.
Woodbine Normal School,	M. A. Reed. H. A. Kinney.

The work done in the schools named below is regarded as of sufficient merit to entitle them to recognition by the University.

Properly certified work from these schools will therefore be received so far as this work meets the preparatory requirements of the University.

HIGH SCHOOL.	PRINCIPAL.
Adair,	L. J. Neff.
Allerton,	J. F. Holliday.
Anita,	F. B. Lawrence.
Audubon,	F. P. Hocker.
Avoca,	J. Peasley.
Bloomfield,	Will Fortune.
Brighton,	S. T. Walker.
Britt,	A. M. Deyoe.
Charter Oak,	C. F. Garrett.
Clarence,	J. H. Morgan.
Clarion,	S. T. May.
Clearfield,	H. S. Ash.
Clear Lake,	D. H. Campbell.
Corydon,	Charles Carter.
DeWitt,	Margaret Buchanan.
Dysart,	H. O. Bateman.
Eldon,	E. C. Mills.
Elkader,	J. E. Webb.
Exira,	C. W. Johnson.
Fayette,	F. E. Finch.
Fontanelle,	C. C. Smith.
Garner,	J. F. Doderer.

HIGH SCHOOL.	PRINCIPAL.
Glidden,	J. H. Beveridge.
Grundy Center,	J. E. Stout.
Hubbard,	W. O. Reed.
Keosauqua,	F. E. Buck.
Kingsley,	Ernest Richards.
Lake Mills,	O. O. Vogenitz.
Lyons,	J. H. Breese.
Manning,	W. H. Reever.
Mechanicsville,	Clarence McCracken.
Milton,	R. A. Elwood.
Morning Sun,	A. M. M. Dornon.
Moulton,	E. B. Rossiter.
Nashua,	C. J. Trumbauer.
Neola,	O. J. McManus.
North English,	C. E. Fleming.
Northwood,	E. W. G. Vogenitz.
Odebolt,	Charles Henry.
Orange City,	O. W. Herr.
Riceville,	P. M. Ray.
Richland,	S. M. Rowley.
Rolfe,	A. T. Rutledge.
Sac City,	J. N. Hamilton.
Shelby,	C. S. Cobb.
Shell Rock,	C. E. Buckley.
Sioux Rapids,	T. B. Morris.
Springville,	S. S. Milligan.
State Center,	Lucy Curtis.
Tama City,	C. E. Locke.
Victor,	W. H. Whitford.
Wapello,	J. W. Cradler.
West Union,	G. E. Finch.
Wilton,	P. A. McMillen.
Hawarden Normal School,	J. H. Orcutt.
Nora Springs Seminary,	H. A. Dwelle.
St. Ansgar Seminary,	J. O. Sethre.

ADVANCED STANDING.

Students from approved colleges bringing certificates of work and standing will be admitted without examination. In determining their position in the University, however, the value of the work done will be measured by the University standards.

Students coming from colleges whose requirements for admission are substantially those of the University will be admitted ordinarily to equal rank, provided they enter not later than the beginning of the Senior year. In every instance at least one year's work in residence must be completed in the Collegiate Department of the University. The assignment of studies shall be at the discretion of the Faculty.

Graduates of the four years' course of the Iowa State Normal School will be admitted to Junior standing without examination, and will be required to spend two years at the University before receiving a degree. Graduates of the three years' course will be admitted to Sophomore standing and will be required to spend three years in residence.

Undergraduate Courses.

CLASSICAL COURSE.

Freshman Year.	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
Greek	5	5	5
Latin	4	4	4
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	3	3

Sophomore Year.	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week
French or German	5	5	5
English	2	2	2
Elective	8	8	8
Military Drill	3	1	
Junior Year.			
Elective	15	15	15
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE A.

Freshman Year.	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
German or French	5	5	5
Latin	4	4	4
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	1	3
Sophomore Year.			
French or German	3	3	3
Latin, German or French	5	5	5
English	2	2	2
Elective	5	5	5
Military Drill	3	1	3
Junior Year.			
Philosophy	2 or 3	2 or 3	2 or 3
Elective	12 or 13	12 or 13	12 or 13
Military Drill	3	1	3

Senior Year.	FALL.	WINTER.	SPRING.
	Hours a week.	Hours a week.	Hours a week.
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE B.

Freshman Year.	FALL.	WINTER.	SPRING.
	Hours a week.	Hours a week.	Hours a week.
German	5	5	5
Latin or French	5	5	5
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	1	3
Sophomore Year.			
German	3	3	3
English	2	2	2
Latin or French	5	5	5
Elective	5	5	5
Military Drill	3	1	3
Junior Year.			
Elective	15	15	15
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science must be taken in this course. In the Junior and Senior years a *major*, the equivalent of not less than three hours extending through two years, and a kindred *minor* of not less than three hours extending through one year, must be taken. Each student may select his own major, but in the

selection of his minor he must seek the advice of the professor in charge of the major, or of a committee of the Faculty. *Students entering this course on the terms prescribed for admission to the Scientific Course, but without the full Latin requirements for entrance to Course Philosophical A, must complete them after entrance, and the University will temporarily provide for instruction in Cæsar, Cicero's Orations and Vergil.* This provision is made solely in the interest of considerable numbers of high school graduates whose course has not furnished the opportunity for fulfilling these requirements.

GENERAL SCIENTIFIC COURSE.

Freshman Year.	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
German or French	5	5	5
Mathematics	5	5	5
English	2	2	2
History or Drawing	2	2	2
Military Drill	3	1	3
Sophomore Year.			
German or French	5 or 3	5 or 3	5 or 3
English	2	2	2
Physics	5	5	5
Botany, Zoology, Morphology, Geology, Chemistry, Mathematics, or Astronomy	5	5	5
Military Drill	3	1	3
Junior Year.			
German or French	3 or 5	3 or 5	3 or 5
Chemistry	5	5	5
Botany, Zoology, Morphology, or Geology	5	5	5
Elective	3 or 5	3 or 5	3 or 5
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

No substitution whatever is allowed for any of the required work of the Scientific Course, except that an equivalent amount of Latin of collegiate grade may be offered in place of the full requirement in either one of the modern languages.

SPECIAL COURSES IN SCIENCE.

The student who wishes, in his undergraduate course, to specialize in some particular line of scientific study, should at the beginning of the Sophomore year choose from the group of alternate electives then open to him (Botany, Zoology, Morphology, Geology, Chemistry, Mathematics and Astronomy) that subject most directly connected with the branch to which he wishes to give special attention. He will thus be able to pursue his chosen study without interruption through three years of his course, the last year of which may, if he so choose, be devoted entirely to his specialty.

Such extreme specialization is not recommended to undergraduate students, it being the opinion of the Collegiate Faculty that a better preparation for a scientific career will be afforded by a broader and more liberal course of study. However, those wishing to specialize in any branch of science are urged to confer freely with the professors with whom they expect to pursue such study.

Unless excused by the Faculty, each student pursuing a special course in Science will be required in his Senior year to prepare a thesis upon some subject approved by the professor in charge of his specialty, such thesis to represent an amount of work entitling the writer to at least two credits.

COMBINED SCIENTIFIC AND MEDICAL COURSE.

1. Students who pursue the General Scientific Course and complete not less than two years of biologic science, and in the third year choose as one elective Anatomy and Dissection in the Medical Department, and in the fourth year two electives in the Medical Department, of which Anatomy and Physiology shall be one, may receive credit for the first two years of the regular course in Medicine, provided also that such students complete at least two electives in the Collegiate Department in the spring terms of the fifth and sixth years.

2. Students who at the outset declare their intention of pursuing a combined Collegiate and Medical Course, may in the General Scientific Course offer instead of German, two years' work in Latin.

3. The degree of B. S. shall be conferred in June of the sixth year.

COURSE IN CIVIL ENGINEERING.

FRESHMAN YEAR.

Fall Term.—French or German,* 5.† Mathematics, 5. English, 2. Drawing, 5. Military Drill, 3.

Winter Term.—French or German, 5. Mathematics, 5. English, 2. Drawing, 5. Military Drill, 1.

Spring Term.—French or German, 5. Mathematics, 5. English, 2. Surveying, 5. Military Drill, 3.

SOPHOMORE YEAR.

Fall Term.—German or English,* 3. Mathematics, 5. Surveying, 5. Physics, 5. Military Drill, 3.

Winter Term.—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Mapping, 3. Physics, 5. Military Drill, 1.

Spring Term.—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Topographical Surveying, 3. Physics, 5. Military Drill, 3.

JUNIOR YEAR.

Fall Term.—Electricity and Magnetism, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Railroad Curves, 3. Steam Engine, 2. Military Drill, 3.

Winter Term.—Dynamo and Motor, 3. Resistance of Materials, 2. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Theory of Stresses, 3. Limes and Cements, 2. Military Drill, 1.

Spring Term.—Thermodynamics, 3. Hydraulics, 5. Graphical Statics, 4. Theory of Stresses, 5. Military Drill, 3.

SENIOR YEAR.

Fall Term.—Chemistry, 5. Sanitary Engineering, 2. Structural

* Note.—See Courses of Instruction in Civil Engineering for requirement in language.

† Note.—The numerals mean hours a week.

Drawing and Designing, 4. Geology, 2. Civil Engineering, 4. Military Drill, 3.

Winter Term.—Chemistry, 5. Sanitary Engineering, 2. Designing, 3. Laboratory, 2. Geology, 2. Civil Engineering, 3. Military Drill, 1.

Spring Term.—Water Supply Engineering, 3. Specifications and Contracts, 3. Geology, 2. Civil Engineering, 3. Laboratory, 2. Designing, 3. Thesis. Military Drill, 3.

COURSE IN ELECTRICAL ENGINEERING.

FRESHMAN YEAR.

Fall Term.—German or French, 5.† Mathematics, 5. English, 2. Drawing, 5. Military Drill, 3.

Winter Term.—German or French, 5. Mathematics, 5. English, 2. Drawing, 5. Military Drill, 1.

Spring Term.—German or French, 5. Mathematics, 5. English, 2. Draughting, 5. Military Drill, 3.

SOPHOMORE YEAR.

Fall Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

Winter Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 1.

Spring Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

JUNIOR YEAR.

Fall Term.—Physics: lectures, 1, laboratory, 4. Chemistry, 5. Analytical Mechanics, 3. Applied Mechanics, 2. Shop-work, 2. Military Drill, 3.

Winter Term.—Physics: lectures, 1, laboratory, 4. Chemistry, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Shop-work, 2. Military Drill, 1.

Spring Term.—Direct Current Dynamo, 3. Physical Laboratory, 2. Chemistry, 5. Differential Equations, 3. Heat and Thermo-Dynamics, 2. Shop-work, 2. Military Drill, 3.

† Note.—The numerals mean hours a week.

SENIOR YEAR.

Fall Term.—Theory of Electricity, Photometry; Electrical Laboratory, 10. Draughting, 3. Steam Engine, 2. Military Drill, 3.

Winter Term.—Alternate Current Machinery, Electrical Laboratory, 10. Draughting, 3. Strength of Materials, 2. Military Drill, 1.

Spring Term.—Distribution and Transmission of Electricity, Telegraph and Telephone Electrical Laboratory, 10. Electro-Chemistry, 5. Military Drill, 3.

NOTE.—One year of German and one of French are required. Either may be taken during the Freshman year, to be succeeded by the other in the Sophomore year. Electro-chemistry, being given only during even-numbered years, will alternate with the Junior spring term chemistry.

BACCALAUREATE DEGREES.

For each of the courses of study leading to a bachelor's degree four years' work is required.

On completion of the regular courses, or of the special courses approved by the Faculty, the following degrees are conferred:

BACHELOR OF ARTS upon those who complete the Classical Course.

BACHELOR OF PHILOSOPHY upon those who complete the Philosophical Course.

BACHELOR OF SCIENCE upon those who complete the General Scientific Course, or either of the Engineering Courses, or a special course in science which has previously been approved by the Faculty.

See Combined Scientific and Medical Course.

The degree of BACHELOR OF DIDACTICS is conferred upon *graduates* in the regular courses who have completed the course in Pedagogy and can show proof of two years' successful teaching after graduation.

SPECIAL TEACHERS' CERTIFICATES.

Special Teachers' Certificates as to scholarship in German or in French will be granted under the authority of the Collegiate Faculty on the following conditions:

1. They shall be issued to students of this University on or after graduation only.

2. They shall be in the nature of an authorized guaranty as to scholarship in German or in French.

3. They shall be issued only after *at least* three years of full work (to represent *five* hours of lectures and recitations a week or an equivalent) in one of these subjects.

4. Candidates must pass a final examination in the subject in which the certificate is desired.

5. The examination must be conducted by the professor in charge of the subject, assisted by such other instructors as may be agreed upon by him and the President of the University.

6. These certificates will be signed by the President and by the professor immediately concerned.

Courses of Instruction.

LATIN LANGUAGE AND LITERATURE.

PROFESSOR CURRIER; ASSISTANT PROFESSOR POTTER, MISS HUGHES, MISS HOLMES.

1. **Cæsar, Cicero and Vergil.** Cæsar, Cicero's Orations and Vergil's Aeneid. For students in Course Philosophical B as indicated on page 32. Miss HUGHES and Miss HOLMES.

Throughout the year.

2. **Livy, Cicero, Vergil and Terence.** Fall: Livy, Selections from Books I., XXI. and XXII. Winter: Cicero's De Senectute or De Amicitia, Somnium Scipionis and Vergil's Georgics II, with outline of Roman Literature. Spring: Terence's Phormio and Cicero's Letters. Grammar, writing Latin and sight reading during the year. Those who show marked proficiency in writing Latin during the fall term are allowed an option of easy Latin to be read under the direction of the instructor during the winter and spring terms. Assistant Professor POTTER and Miss HUGHES.

Throughout the year. Mon., Tu., Wed. and Thu., at 10, 11 and 2:30.

3. **Cicero and Horace.** Fall: Cicero's Tusculan Disputations. Winter and spring: Horace's Odes, Satires and Epistles. This course is mainly occupied with the literary side of the authors studied. Professor CURRIER.

Throughout the year, Mon., Wed. and Fri. at 9.

4. **Pliny and Tacitus.** Selected Letters of Pliny. Tacitus' Germania and Agricola. This course is principally literary and historical. As much attention is given to the Latinity of the Silver Age as is needful for the understanding and appreciation of the authors. Assistant Professor POTTER.

Throughout the year, Tu. and Thu. at 9.

5. **Cicero, Quintilian and Tacitus.** Fall: Cicero's De Oratore. Winter: Quintilian, Books X and XII. Spring: Tacitus' De Oratoribus. Particular attention will be paid to literary criticisms as exemplified in these authors. Professor CURRIER.

Throughout the year, Tu. and Thu. at 8.

6. **Tacitus and Seneca.** Fall and winter: Tacitus, selections from the Annals and Histories. Spring: Seneca's Morals and Letters. Professor CURRIER.

Throughout the year, Tu. and Th. at 8.

Courses 5 and 6 are given in alternate years.

7. **Plautus.** Three plays. The treatment is mainly literary with due attention to metres and ante-classical forms and constructions. Assistant Professor POTTER.

Fall term, three hours a week.

8. **Early Latin Inscriptions and Poetry.** Assistant Professor POTTER.

Fall term, three hours a week.

Courses 7 and 8 are given in alternate years.

9. **Lucretius and Catullus.** Assistant Professor POTTER.

Winter term, three hours a week.

10. **Cicero's Letters.** The selections will be such as to show Cicero in the character of a private gentleman rather than as a politician. Assistant Professor POTTER.

Winter term, three hours a week.

Courses 9 and 10 are given in alternate years,

11. **Juvenal and Martial.** Assistant Professor POTTER.

Spring term, two hours a week.

12. **Tibullus and Propertius.** Assistant Professor POTTER.

Spring term, two hours a week.

Courses 11 and 12 are given in alternate years.

13. **Seminary in Cæsar, Cicero and Vergil.** This is intended to meet the needs of prospective Latin teachers and others who wish to gain some familiarity with the methods of original research. The fall term is devoted to syntactical and historical studies covering Cæsar's Gallic War (seven books). The work of the winter term is mainly historical, and deals with Cicero's career as an orator. One-

half of the term is devoted to a study of the conspiracy of Catiline which is based largely on Sallust. Vergil's Aeneid complete is studied in the spring term mainly on the literary side. Assistant Professor POTTER.

14. *a.* **History of Roman Literature.** The course will be given by informal lectures with assigned readings in Teuffel, Cruttwell, Sellar, Simcox and the standard monographs.

Fall term, two hours a week.

b. c. **Latin Syntax.** Introduction to the study of historical syntax. Assitant Professor POTTER.

Winter and spring terms, two hours a week.

Courses 13 and 14 are given in alternate years.

15. **Roman Antiquities.** A systematic study of private life and of legal and political Antiquities. Professor CURRIER.

Throughout the year, two hours a week at 2:30.

16. **Seminary in Archæology.** For 1898–9 the subject will be the Topography and Archæology of Rome and the vicinity. Professor CURRIER.

17. **Cicero, Livy and Ovid.** Sight reading of suitable selections. Professor CURRIER.

Throughout the year, one hour a week.

Courses 5 and 6 are open to students who have completed Courses 2 and 3 or 4 and must precede the other courses offered. Course 16 is intended for graduate students, and Courses 5—17 are open to them.

GREEK LANGUAGE AND LITERATURE.

ASSISTANT PROFESSOR CALL.

For the present a course in Goodwin's Greek Grammar, White's First Greek Book and Xenophon's Anabasis will be given to students who enter without the required preparation in Greek.

Throughout the year, daily at 11.

1. **Xenophon, Lysias and Homer.** Fall: Xenophon's Anabasis with written exercises based on the text read, and review of

grammar. Winter: select orations of Lysias, social customs and political institutions. Spring: Homer's Iliad with study of Homeric times and the history and character of Greek epic poetry.

Throughout the year, daily at 10.

2. Herodotus, Plato and Demosthenes. Fall: selections from Herodotus. Winter: Plato's Apology with sight reading from Xenophon's Memorabilia. Spring: Demosthenes' Oration on the Crown.

Throughout the year, Mon., Wed., Fri., at 9

3. Greek Tragedy. Fall: Aeschylus' Prometheus Bound. Winter: Sophocles' Antigone. Spring: Euripides' Alcestis. With this course are required supplementary readings from other tragedies and reports on the origin, literary form, and representation of Greek tragedy.

Throughout the year, Mon., Wed., Fri., at 8.

4. Late Greek. Fall: New Testament. Winter: Plutarch's Pericles. Spring: Lucian's Dialogues.

Throughout the year, Tu., Th., at 9.

5. Greek Poetry. A course in Greek poetry through translations will be given to students who have no knowledge of Greek. Fall: epic poetry. Winter: dramatic poetry. Spring: lyric poetry.

Throughout the year, Tu., Th., at 8.

Course 1 is required of students in the classical course. Courses 2, 3 and 4 are open to students who have completed Course 1.

GERMAN LANGUAGE AND LITERATURE.

PROFESSOR WILSON; MR. STURM, MR. SCHLENKER.

In the instruction in the German language the first year is spent in laying a broad foundation for the future work. At the beginning of the second year it is expected that the student will be able to read the literature with some degree of appreciation, and from this time on the ability to understand and to appreciate the great masterpieces of German literature is the main object in view; at the same time, how-

ever, the origin and history of words, and the relation that the German language bears to the English tongue are studied and explained. But the courses are, as a whole, literary rather than strictly philological or linguistic. Sight-translation, translating at hearing, writing from dictation, and conversation, as means to a proper *Sprachgefuehl*, form a part of the work.

As stated elsewhere, an equivalent of the work required in the Freshman year, Course 1, will be accepted, and students coming so prepared will be admitted, on examination, to Course 2. Course 1 represents from four to six terms of ordinary high school work. Courses 1, 2, 3 and 4, are Freshman, Sophomore, Junior, and Senior respectively, and must be taken in the order of the numerals. Courses 5 and 6 are advanced courses, but may be open to persons who have done at least 1, 2 and 3, or an equivalent. All the courses in German run through the entire collegiate year and are offered every year.

1. **Grammar and Reading.** Thomas's Practical German Grammar with constant practice in writing German, Storm's Immensee, Baumbach's Die Nonna, and Heyse's L'Arrabbiata. Six sections. Mr. STURM and Mr. SCHLENKER.

Throughout the year, daily.

2. **Freytag, Goethe, and Schiller.** Fall: Freytag's Die Journalisten with a review of the grammar. Winter: Goethe's Hermann und Dorothea, and composition. Spring: Schiller's Jungfrau von Orleans, and composition. Four sections. Professor WILSON, Mr. STURM and Mr. SCHLENKER.

Throughout the year, Mon., Wed., Fri.

3. **German Authors of the Nineteenth Century, and German Lyrics.** Fall: Scheffel's Ekkehard and readings in German on the literature of the nineteenth century. Winter: Heine's Prose, and readings from Heine's Poetry by the instructor. Spring: Buchheim's Deutsche Lyrik, and lectures on German verse with special reference to the lyric poets studied. The work of this term is intended to give a general idea of the historical development of the German lyric from the sixteenth century to the present. Professor WILSON.

Throughout the year, Mon., Wed., Fri., at 11.

4. Goethe, Lessing, and History of German Literature. Fall: Goethe's Faust, Part I, with an outline of Part II. Winter: Lessing's Nathan der Weise. Spring: Outline course in the history of German literature. This term's work gives a general view of the development of German literature from the earliest times to the nineteenth century, special attention being paid to the two classic periods of the twelfth and eighteenth centuries. Egelhaaf's Deutsche Litteraturgeschichte is used as a chronological guide, which is supplemented by reports on assigned reading. Professor WILSON.

Throughout the year, Tu., Th., at 11.

5. German Seminary. For the study and discussion of the works of special periods or of special movements. The Faust Books, Marlowe's Faustus, Goethe's Faust, and the Romantic School are some of the subjects that have been studied. This course is primarily for graduate and advanced students. Admission by personal application. The course counts as a half credit each term. When the majority of applicants so elect, this work may be made a course in Advanced German Composition. Professor WILSON.

Throughout the year, Tu., at 2:30.

6. Middle High German. Fall: Otis's Introduction to Middle High German, including the selections from the Nibelungenlied, and Paul's Mittelhochdeutsche Grammatik. Winter: selections from Hartmann von Aue's Der arme Heinrich. Spring: Middle High German lyric poetry, principally the poems of Walther von der Vogelweide. This course is primarily for graduate and advanced students, especially those who expect to teach German. Professor WILSON.

Throughout the year, Tu., Th,, at 10.

Special Teachers' Certificates as to scholarship in German are granted on or after graduation on conditions stated elsewhere in this Catalogue. The minimum amount of work required for such certificates is represented by Courses 1, 2, 3, and two chosen from 4, 5 and 6, but it is recommended that candidates make preparation in all these Courses.

FRENCH LANGUAGE AND LITERATURE.

PROFESSOR VAN STEENDEREN; MISS HUTCHINSON.

1. **Elementary French.** Grammar, reading, composition and conversation: Bevier's French Grammar, Joynes' Fairy Tales, Lewis's Michel Strogoff, Fontaine's Lectures Courantes, Herdler's Scientific Reader. Four sections. Miss HUTCHINSON and Professor VAN STEENDEREN.

Throughout the year, daily.

2. **French Composition.** Written and spoken composition. Grandgent's French Composition and Méthode Berlitz, Part II. Two sections. Professor VAN STEENDEREN.

Fall term, Mon., Wed., Fri.

3. **Intermediate French.** Reading and composition. Dumas' Les Trois Mousquetaires, Victor Hugo's Hernani and Les Misérables. Grandgent's Composition continued. Two sections. Professor VAN STEENDEREN.

Winter and spring terms, Mon., Wed., Fri.

4. **History of French Literature.** A reading course with lectures, recommended to be taken with courses 2 and 3. Aubert's Littérature Française, Montaigne's De l'Institution des Enfans. Professor VAN STEENDEREN.

Throughout the year, Tu., Th.

5. **Modern French Authors.** Each student reads and paraphrases about six representative works by different authors. The University library provides these works. Fortier's Sept Grands Auteurs du XIX^e^ Siècle and Mellé's Contemporary French Writers. Professor VAN STEENDEREN.

Fall and winter terms, Mon., Wed.

6. **Advanced French Composition and Syntax.** Leune's Difficult Modern French. Free composition on subjects assigned. Professor VAN STEENDEREN.

Spring term, Mon., Wed.

7. **French Classical Drama and Fables.** Corneille's Le Cid and Horace; Racine's Athalie, Molière's Les Femmes Savantes and Le Tartuffe, La Fontaine's Fables. Professor VAN STEENDEREN.

Throughout the year, Tu., Th.

8. **Seminary.** Nineteenth century French literature. Professor VAN STEENDEREN.

Throughout the year, Wed.

9. **Seminary.** Seventeenth century French literature. Professor VAN STEENDEREN.

Only one of these Seminaries will be given in 1898–99.

10. **Spanish.** Edgren's Spanish Grammar. Ramsey's Elementary Spanish Reader.

Spring term, Tu., Fri.

Courses 2 and 3, 5 and 6 are to be taken together. Course 10 can be taken only with or after course 1.

Special Teachers' Certificates as to scholarship in French are granted on or after graduation on conditions explained elsewhere in this Catalogue.

ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR REEVES; MR. COOK, MR. KELLY.

The organization of the following courses has in view the study of English as a means of expression, as a literature, and as a language.

The first and most important of these courses, the rhetorical, undertakes to enlarge and strengthen the student's own power of expression. Constant writing is required in the Freshman year, and the criticism, both oral and written, is directed to the individual needs of the student. Informal personal conferences are added to the work of the class, and every effort is made to enable the student to form a clear, forcible and sensible style.

In the study of English as literature a general survey from Old English times to the present is first required of all Sophomores. After this course has been completed the student may elect more

special work. In the Junior and Senior years the study is about equally divided between the matter involved in the text, and the manner or style in which the text is written. Sound principles of criticism, analytic and constructive, are insisted upon, while outside reading of other masterpieces, with written reports, is designed for the cultivation of the student's own taste and judgment.

The study of the language itself is closely connected with both the rhetorical and the literary study of English. The characteristic changes in phonology, grammar, spelling, syntax and vocabulary, are studied historically, and representative texts in Anglo-Saxon, Middle English and Early Modern English are read in class. This course is required for entrance into the more literary study of Anglo-Saxon and Middle English of the Senior year.

The graduate work in English, while presupposing a knowledge of the principal courses in the Collegiate Department, may be arranged to the needs of the student and thus permit him to offer one or more electives in studying for an advanced degree. The Seminary subject for 1898–99 will be Nineteenth Century Poetry.

Candidates for all baccalaureate degrees are required to complete two years of English, or six terms of two hours a week. Freshmen will take Course 1, and Sophomores Course 4. Those who are preparing to teach English will be expected to take Course 12 in addition to some of the elective courses in literature. Law students wishing to take work in English will find Course 10 especially helpful, and also the rhetorical practice in Exposition and Argumentation.

(1) COMPOSITION AND RHETORIC.

1. **Constructive Rhetoric.** Recitations and semi-weekly themes. Five sections. Required of Freshmen. Professor REEVES, Mr. COOK and Mr. KELLY.

Throughout the year, two hours a week.

2. **Advanced Composition.** Lectures. Wendell's English Composition, and suggestive works of style. Tri-weekly and fortnightly themes, Open to those only who have attained Grade A in Course 1, and who wish to add to the training of that course. Mr. COOK.

Fall and winter terms, two hours a week.

3. Versification. Practice in metrical composition in the fixed forms of verse such as the heroic couplet, blank verse, Spenserian stanza, ode, rondeau, sonnet, ballad and song. Analysis of the best examples of these forms in English poetry. Informal discussion of artistic questions. Open to those who have had Course 2. Mr. COOK.

Spring term, two hours a week.

(2) ENGLISH LITERATURE.

4. English Literature. General survey from earliest times to the present. Recitation and reports. Four sections. Required of Sophomores. Professor REEVES, Mr. COOK and Mr. KELLY.

Throughout the year, two hours a week.

5. Chaucer's Poetry. A study in fourteenth century art. Open to those who have had the training of Course 4 in Chaucer's grammar and pronunciation. Lectures; Skeat's The Student Chaucer. Mr. COOK.

Spring term, two hours a week.

6. Nineteenth Century Poetry. Seminary. Outside reading and reports, with lectures. Fall term: Wordsworth, Coleridge, Shelley and Keats. Winter term: Tennyson and Browning. Spring term: Matthew Arnold and minor poets. Open to Seniors. Professor REEVES.

Throughout the year, two hours on Monday afternoon.

7. Shakspere and His Fellow-Playwrights. A critical study of dramatic art. Lectures, reading of plays, reports. Freytag's Technique of the Drama, Moulton's Shakspere as a Dramatic Artist, any standard edition of Shakspere, and, in the library, the Mermaid series. Junior and Senior elective. Mr. COOK.

Fall and winter terms, two hours a week.

8. English Literature of the Eighteenth Century, Lectures and reports on assigned readings of masterpieces and standard criticism. Junior and Senior elective. Alternate years; not to be given in 1898–99. Mr. KELLY.

Fall and winter terms, two hours a week.

9. Nineteenth Century Prose. Fall term: Carlyle and Emerson. Winter term: Ruskin and Newman. Spring term: Matthew

Arnold, Pater and minor prose writers. Junior and Senior elective. Professor REEVES.

Throughout the year, two hours a week.

10. **Essayists and Orators.** Lectures and recitations. Fall term: A critical study of De Quincey and Macaulay in respect to style and substance. Winter term: Burke as a stylist, debater and orator, with such reference to his political philosophy and to contemporaneous history as is necessary to a clear understanding of his importance in political literature. Spring term: Webster, and other American orators and essayists. Junior and Senior elective. Mr. KELLY.

Throughout the year, two hours a week.

11. **American Literature.** Lectures, recitations and reports on assigned readings. General survey of both poetry and prose, including political literature and oratory. Alternate years; to be given in 1898–99. Mr. KELLY.

Throughout the year, two hours a week.

(3) ENGLISH LANGUAGE.

12. **History of the English Language.** Lectures and recitations. Emerson's History of the English Language and Bright's Anglo-Saxon Reader. Junior and Senior elective. Professor REEVES.

Throughout the year, two hours a week.

13. **Anglo-Saxon and Middle English.** Open to those who have had Course 12. Senior Elective. Professor REEVES.

Throughout the year, two hours a week.

14. **Gothic and Old Saxon.** Braune's Gothic Grammar with Selections, and Heyne's Heliand. Lectures on relation of English to other Germanic languages. Graduate course 1898-99. Professor REEVES.

Throughout the year, two hours a week.

15. **Teachers' Course.** In the spring term a course of lectures for teachers of English in secondary schools will be given, one hour a week. The Course will include historical grammar, syntax, phonology, and methods of studying literature and constructive rhetoric. Professor REEVES.

For prizes in English see general subject of prizes.

ELOCUTION.

MRS. PARTRIDGE.

1. **Elementary Vocal Training.** Studies in phonics with reference to articulation, and the eradication of faults of speech or voice; development of breath control for artistic voice production; studies of the factors of speech; the timbre of the voice; stress as applied to tones, emphasis and accent, with selections adapted for illustration and analysis; studies in gesture; readings from standard authors.

This course is open to Collegiate Freshmen, and Junior Law students. Throughout the year, two hours a week.

2. **Vocal Expression.** Elementary Principles of Vocal Expression: correct mental action in reading and speaking; studies and presentations from speeches and forms of the drama, to develop the powers of conception and the ability to express every phase of human experience as a means of securing simplicity and naturalness in all kinds of speaking. Lectures on problems in vocal expression. Study of monologues, impersonations, and miscellaneous selections, with individual criticism. This course is open to Sophomores who have completed Course 1.

Throughout the year, one hour a week. Each student receives in addition to class exercises a private rehearsal each week.

3. **Oratory.** Application of the principles of expression to the oratory of the bar: special exercises for the development of extemporaneous speaking; study of orations with the methods employed by leading orators; selections from Shakspere's tragedies and comedies as one of the best means of studying human character, studies in gesture for developing self-control and spontaneity of action. This course is open to Senior Law students.

Fall and winter terms, two hours a week.

HISTORY.

PROFESSOR WILCOX; MR. PLUM.

1. **History of Greece.** Text-book and lectures. This course is intended primarily for members of the Freshman class. Mr. PLUM.

Fall term, two hours a week.

2. **History of Rome.** Text-book and lectures. This work consists of two parts: the History of the Roman Republic in the winter term, and the History of the Roman Empire in the spring term. The work of both terms is designed for members of the Freshman class. Mr. PLUM.

Winter and spring terms, two hours a week.

3. **History of Mediæval Europe.** Text-book and lectures. This course is intended primarily for members of the Sophomore class and presupposes acquaintance with the History of Greece and Rome. The course is divided into three parts to correspond with the three terms of the University year. The first part, constituting the work of the fall term, extends from the final overthrow of the western Roman empire in 476 A. D. to the death of Charles the Great, 814 A. D. The work of the winter and spring terms traces the downfall of the Carolingian system and its gradual reconstruction into Modern Europe. Mr. PLUM.

Three terms, two hours a week.

4. **History of the Jews.** Lectures and special assignments. A History of the Hebrew people from Abraham down to the destruction of Jerusalem by the Romans. This course is designed to give the student some knowledge of Oriental life and political institutions, and as well to trace the development and significance of one of the great Semitic Religions. Not open to Freshmen. Mr. PLUM.

Fall and winter terms, two hours a week.

5. **Constitutional History of England.** Analyses and lectures. This course is intended for members of the Junior and Senior classes only. As much previous work as possible in Ancient and Mediæval History should be taken before beginning this course. Professor WILCOX.

Three terms, three hours a week.

6. Constitutional History of the United States. Lectures. This course is designed for Senior and graduate students. The course embraces, during the fall term, the study of the origin and development of the constitution of the United States, from preceding political forms. The winter term continues the work in a study of the text of the constitution in the light of its historical outworking. The spring term finishes the work with a study of the working of the United States Government under the constitution from 1789 to the present. Professor WILCOX.

Three terms, three hours a week.

7. The French Revolution and the Napoleonic Era. This course is designed for Senior and graduate students. Considerable work in Mediæval History is an indispensable prerequisite. Professor WILCOX.

Fall and winter terms, two hours a week.

8. The Nineteenth Century History of Europe. This is a sequel to Course 7 or its equivalent, and is open to the same classes of advanced students. Professor WILCOX.

Spring term, two hours a week.

9. Seminary in English History. This course is intended primarily for graduate students who are qualified to specialize in English History. Those Senior students who have had Course 4 and are capable of doing original and independent work will be admitted to this Seminary. Professor WILCOX.

Three terms, two hours a week.

10. Seminary in United States History. This course is also primarily designed for graduate students, but exceptions are made similar to those specified for Course 9. Professor WILCOX.

Three terms, two hours a week.

All the courses in History, including the two Seminaries, are given each year. There are no alternating courses.

All courses in History are elective. Admission to the courses is conditioned only upon the qualifications of the candidate who desires to take the courses.

Students are advised to plan their historical work so that it will be logical in its order of sequence. Students who intend to emphasize

historical work in college are urged to make careful preparation in History in preparatory schools.

In arranging the courses in History in the University, the attempt has been made to present the entire field of historical study with reference to logical and chronological sequence, so that no period shall be neglected and each period be treated in the light of what goes before and what comes after.

POLITICAL SCIENCE.

PROFESSOR LOOS; MR. VAN LAW.

The several subjects in charge of the professor of political science are here grouped under the following headings: (1) *Political Economy and Finance*, (2) *Sociology and Political Philosophy*. The courses of the first group are, in the main, Junior and Senior electives, while those of the second are open only to Seniors and graduate students. Exceptions to these rules may be made in individual cases by the special permission of the professor in charge.

All the courses under the first group, except 1 and 2, presuppose some knowledge of the general principles of political economy as laid down in the manuals by Walker or Mill. Students who are not thus prepared are required to take Course 2 (not Course 1) as a preparation for the other courses in economics; Course 5 may, however, be taken at the same time with Course 2. Candidates for admission to advanced courses should in all cases consult the professor in charge before scheduling.

POLITICAL ECONOMY AND FINANCE.

1. **Economic History.** After an introductory study of primitive man and primitive civilization (Starr's First Steps in Human Progress) the course will occupy itself mainly with the development of trades and manufactures in Europe (Gibbins's Industry in England), and later with the industrial development of the United States (Wright's

Industrial Evolution of the United States). Open to Sophomores. Mr. VAN LAW.

Throughout the year, Tu., Th., at 8.

2. Economics. An introduction to the study of political economy. Text-book and lectures. Open to Juniors and to special students. Professor LOOS and Mr. VAN LAW.

Fall term, Mon., Wed., Fri., at 11.

This course will be repeated during the second half of the year when it will be in charge of Mr. VAN LAW. Two hours, with an occasional third hour for hearing reports on assigned topics.

Winter and spring terms, Tu. and Th., at 9.

3. Finance, Currency and Banking. *Currency and Banking.* Lectures on money and credit with text-book study of Dunbar's History and Theory of Banking, followed by a sketch of the financial history of the United States with particular reference to the development of banking and the history of the currencies. *Public Finance.* Lectures on the Science of Public Finance followed by a study of the Tariff History of the United States with some notice of the consular and diplomatic service. The second part of this course is given only every other year. It alternates with International Law (Government 10) which will be given in 1899. Professor LOOS and Mr. VAN LAW.

Winter and spring terms, Mon., Wed., Fri., at 11.

4. Transportation. The course will deal chiefly with railways; railroad organization and management, explanation of terms in common use in railroad accounts and reports, history of railroad development, discussion of rates, competition, discrimination, and state management (Hadley's Railroad Transportation), the commission system —state and inter-state. Mr. VAN LAW.

Winter and spring terms, Tu., Th., at 2:30.

5. History of Political Economy. The history of political economy before, and including, Adam Smith. Beginning with a brief reference to ancient and mediæval systems of industry and economic ideas, the course will occupy itself with a closer study of the modern era, the writings of the mercantilists, of the physiocrats, and of Adam Smith and his precursors.

6. The Industrial Revolution and Modern Social Questions. An elementary course in recent economic history and theory.

An analysis of the industrial revolution with lectures on the rise of the classical school of political economy, modern socialism, contemporary economic schools, and recent tendencies in legislation. Professor LOOS.

Winter and spring terms, Tu., Th., at 10.

7. **Public Finance.** A study in state expenditure, state income, and state debts. The class will read Bastable's Public Finance. Open to those who have taken Course 2 or its equivalent. Professor LOOS or Mr. VAN LAW.

Fall term, Tu., Th., at 9.

8. **Taxation.** This course is designed as a continuation of Course 7 for those who wish to do further work in public finance, and will be conducted as a research course. Papers will be prepared first on the literature of taxation; these will be followed by a series of special studies in existing systems of taxation—national, commonwealth and local. Professor LOOS or Mr. VAN LAW.

Winter and spring terms, hours to be appointed.

9. **The Principles of Economics.** The development of the classical political economy will be carefully studied. Special attention will be given also to the mathematical work of Jevons and other writers; and to the recent contributions of the Austrian school. Professor Marshall's Principles of Economics will be used as a text. For Seniors and graduate students. Professor LOOS.

Throughout the year, Mon., Th., at 2:30.

10. **Debating Course.** May be counted also as an English elective. Selected topics in economics and politics. The course was not given in 1897–98. Mr. KELLY and Professor SHAMBAUGH.

Fall and winter, hours to be appointed.

SOCIOLOGY AND POLITICAL PHILOSOPHY.

1. **Sociology.** Part 1. Lectures during the fall term on the primary factors and forces of social phenomena. Special attention is given to the earliest phases of political organization. Part 2. In the winter term, pauperism, crime, police, and sanitation receive special attention. The close relation of the so-called practical sociology to

the German Verwaltungslehre will be pointed out. Open to Seniors and graduates. Professor LOOS.

Fall and winter terms, Mon., Wed., Fri., at 10.

2. **Municipal Government.** A study of municipal government with particular reference to the economic and social problems of modern cities. The course is designed especially for those who have taken the course in sociology but it is open to any student who has taken Economics 2. Professor LOOS.

Spring term, Mon., Wed., Fri., at 10.

3. **Roman Municipalities.** Lectures. For Seniors and graduates. Professor ROHBACH.

Fall or winter, two hours, to be appointed.

4. **Political Philosophy.** A study in political theory, classical and modern, with some notice of state forms. Lectures with critical reading of Aristotle's Politics during the fall term; and Green on Political Obligations and Part 1 of Sidgwick's Elements of Politics during the winter and spring terms. Primarily for graduates. Professor LOOS.

Throughout the year, Tu., Th., at 11.

5. **Seminary in Political Science.** It is the aim of the Seminary to encourage special investigations. Questions in economics, statistics, finance, political philosophy, administration or law may be taken for special research. From time to time papers are read, and then informally discussed and criticised. Primarily for graduates. Professor LOOS and Professor SHAMBAUGH.

Throughout the year, alternate Mondays, 7:30.

GOVERNMENT AND ADMINISTRATION.

PROFESSOR SHAMBAUGH.

To indicate clearly the order in which the several subjects in Government and Administration are presented for purposes of university instruction, the principal subjects are first grouped into three general courses, namely; Politics I., Politics II. and Politics III.

Then, to indicate more clearly the scope and treatment of the several subjects, a specific statement is made of each subject viewed as an independent course.

Politics I. Historical and Descriptive Politics. A study, historical and descriptive, of the leading governments of ancient and modern times. This is a comparative study of political institutions, wherein the more general and obvious phases of political phenomena will be presented. Historical and Descriptive Politics is here regarded as the fundamental course in Government and Administration. Open to all students except Freshmen.

Throughout the year, three hours, Mon., Wed., Fri., at 8.

Politics II. Principles of Government in the United States. A study of the principles of American government—national, commonwealth and local. Fall term: History of Constitutional Government in the United States, including a detailed analysis of leading state papers, e. g., colonial charters, plans for union, commonwealth constitutions, etc. Winter term: American Constitutional Law, wherein the principles of Government in the United States will be discussed from the standpoint of judicial interpretation. Spring term: Local Government in the United States. The course in Local Government will alternate with a course in Political Parties in the United States. Open to Juniors and Seniors.

Throughout the year, three hours, Mon., Wed., Fri., at 9.

Politics III. Political Theory and Comparative Constitutional Law. A study of the general and theoretical aspects of political phenomena. Fall term: Outlines of a system of political theory. Winter term: Comparative Constitutional Law, wherein the theoretical aspects of the constitutions of England, France, Germany and the United States will be considered. Spring term: Papers on selected topics in Political Theory and Comparative Constitutional Law will be prepared and read by the students. This is an advanced course for Seniors and graduates.

Throughout the year, two hours, Tuesday evening.

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1. **Historical and Descriptive Politics.** A study, historical and descriptive, of the leading governments of ancient and modern

times. This is a comparative study of political institutions, wherein the more general and obvious phases of political phenomena will be presented. Fall term: The theory of evolution as a working basis in the study of Historical Politics; some general considerations in Anthropology; primitive institutions of the Indo-Europeans; the origin of government; the political institutions of the ancient Greeks; the political institutions of the Romans. Winter term: Roman Law —four weeks; Feudalism; the government of France; the governments of Germany—the Empire and Prussia. Spring term: the government of Switzerland—federal and cantonal; the government of England. Open to all students except Freshmen.

Throughout the year, three hours, Mon., Wed., Fri., at 8.

2. **History of Constitutional Government in the United States.** A study of the sources and early development of the principles of government in the United States. Herein the development of colonial governments, the growth of federalism and the establishment of the first commonwealth governments will receive special consideration. The following documents will receive detailed analysis: colonial charters, plans for union, Articles of Confederation, Declaration of Independence, the first commonwealth constitutions and the Constitution of the United States. Open to Juniors and Seniors.

Fall term, three hours, Mon., Wed., Fri., at 9.

3. **Constitutional Law.** A study wherein the principles of government in the United States will be discussed from the standpoint of judicial interpretation. The students will read and report upon selected cases in Constitutional Law. Open to Juniors and Seniors.

Winter term, three hours, Mon., Wed., Fri., at 9.

4. **Local Government.** A study of Local Government in the United States, wherein the development of the several forms of township, county and township-county government will receive special consideration. This course will alternate with the course in Political Parties. Open to Juniors and Seniors.

Spring term, three hours, Mon., Wed., Fri., at 9.

Political Parties. A study in the practical workings of American government, wherein the history, organization, operation and

influence of political parties will be discussed. This course will alternate with the course in Local Government. Open to Juniors and Seniors.

Spring term, three hours, Mon., Wed., Fri., at 9.

6. American Political Theory. An advanced course in which the writings of Hamilton, Washington, Jefferson, Madison, Clay, Webster, Calhoun and Lincoln will be read and discussed. A special course for advanced students.

Fall and winter terms, two hours, Tu., Th., at 9.

7. Government in Iowa. A study, historical and descriptive, of the political institutions of the commonwealth of Iowa.

Spring term, two hours.

8. Political Theory. In this course an attempt will be made to present an outline of a system of pure political theory. An advanced course for Seniors and graduates.

Fall term, two hours, Tuesday evening.

9. Comparative Constitutional Law. A comparative study of the constitutions of England, France, Germany and the United States, wherein the general and theoretical aspects of government will be considered. An advanced course for Seniors and graduates.

Winter term, two hours, Tuesday evening.

10. International Law. Lectures on International Law accompanied by recitations from Snow's Cases on International Law as a text book. This course is given in alternate years. It was given in 1896–97. Open to Juniors and Seniors. CHANCELLOR MCCLAIN.

Spring term, two hours, Tu., Th., at 11.

11. Administrative Law. A comparative study of Administrative Law in France, Germany, England and the United States. An advanced course for graduates.

One term, two hours.

12. Roman Law. A course of about twelve lectures on the history and principles of the Roman Law. These lectures are given in connection with and as a part of the general course, Politics I. See above.

PHILOSOPHY.

PROFESSOR PATRICK; ASSISTANT PROFESSOR SEASHORE.

1. **Elements of Deductive Logic.** An elementary course. Text-book: Minto's Logic. Professor PATRICK.

Fall term, Tu., Th., two sections, at 10 and 3:30.

2. **Elements of Inductive Logic.** An introductory course on scientific method. Lectures, with supplementary reading in Minto's Logic and Jevons' Principles of Science. Professor PATRICK.

Winter term, Tu., Th., at 10.

3. **Psychology.** An elementary course in general psychology. In the fall term Dr. SEASHORE will lecture on the nervous system, localization of brain function, the special senses, and sensations. Practical study and dissection of the sheep's brain will accompany the lectures on the nervous system. In the winter and spring terms Professor PATRICK will lecture on general psychology. This course will be accompanied by experimental exercises and by demonstrations with apparatus from the psychological laboratory. The texts of James, Kuelpe, Wundt, and Ladd will be used as references and for assigned readings. Professor PATRICK and Dr. SEASHORE.

Throughout the year, two sections, Mon., Wed., Fri., at 8 and 9.

4. **History of Philosophy.** A course in Greek, mediæval and modern philosophy. Lectures, with assigned readings in the texts of Zeller, Weber, Falckenberg and Erdmann. Professor PATRICK.

Throughout the year, Mon., Wed., Fri., at 11.

5. **Ethics.** An elementary course. The reading of Mackenzie's Manual of Ethics will be accompanied by lectures. Dr. SEASHORE.

Spring term, two sections, Tu., Th., at 9 and 10.

6. **Laboratory Course in Experimental Psychology.** A theoretical and practical course in psychological experiment. The exercises are so arranged as to familiarize the student with the methods and the apparatus of typical experiments in each of the approved lines of psychological research. The students perform the experiments and report and discuss the results and literature on

each subject. Laboratory work and reports. Prerequisite, Course 3. Dr. SEASHORE.

Fall and winter terms, Tu., 2:30 to 3:30. Th., 2:30 to 4:30.

7. **Introduction to Philosophy.** The purpose of this course is to supplement the course in the history of philosophy by a more critical study of philosophical problems and systems. Lectures, with readings from Paulsen's Introduction to Philosophy. Professor PATRICK.

Fall term, Tu., Th., at 11.

8. **Abnormal Psychology.** Hypnosis, sleep, alterations of personality, automatism, hallucinations and illusions, and the psychology of the abnormal and defective classes, will be discussed. Lectures with required reading. Prerequisite, Course 3. Dr. SEASHORE.

Winter term, Tu., Th., at 11.

9. **The Psychology of the Child.** The methods and results of psychological experiments on children. During the past year the class made a series of measurements upon children in the public schools of the city. Dr. SEASHORE.

Spring term, Tu., Th., at 11.

10. **Special Research in Psychology.** Original investigation of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *Studies in Psychology*. This course is primarily for graduates, but may be taken by undergraduates who have had Courses 3 and 6. Dr. SEASHORE.

Throughout the year, hours to be arranged with instructor.

11. **History of Modern Psychology.** An historical treatment of the development of the methods of psychology. This course is a continuation of Course 6, but may be taken together with, or in sequence to, Course 3. Lectures, and reports on reading. Dr. SEASHORE.

Spring term, Tu., Th., at 2:30.

12. **Seminary in Psychology.** Reports and discussions upon a few selected problems in the psychology and philosophy of mind. Special emphasis will be laid upon the nature of consciousness and the theory of knowledge. This course is primarily for graduates but

may be taken by undergraduates who have had Courses 3 and 6. Dr. SEASHORE.

Winter term, two hours, Tu., at 7 p. m.

13. **Seminary in Philosophy.** Papers and discussions upon special problems in philosophy. Theism was the subject taken up the past year. This course is primarily for graduates but may be taken by undergraduates by special permission. Professor PATRICK.

Spring term, two hours, Tu., at 7 p. m.

For the convenience of students wishing to make each year's work in this department continuous throughout the year, the following combinations of courses are suggested:

Courses 1, 2 and 5, two hours, through three terms.

Course 3, three hours, through three terms.

Courses 6 and 11, two hours, through three terms.

Course 4, three hours, through three terms.

Courses 7 (fall), 8 or 12 (winter), and 9, 11 or 13 (spring), two hours, through three terms.

Course 10, two hours, through three terms.

Candidates for the degree of Bachelor of Philosophy are required to take the equivalent of three terms' work of two or three hours each in this department. Course 3, or Courses 1, 2 and 5, are recommended for this requirement.

The Psychological Laboratory, No. 14 North Clinton street, is open daily from 8 to 12 a. m., and from 2 to 4 p. m. A description of the laboratory and apparatus will be found in this catalogue under the head of Material Equipment of the Collegiate Department. The library of philosophy is supplied with the standard works in logic, psychology, ethics, and philosophy, and is open daily during laboratory hours.

PEDAGOGY.

PROFESSOR MCCONNELL; MR. DORCAS.

1. **General Pedagogy.** This course is designed primarily for students who have had no teaching experience. This will be a text-book course and will consist of a general treatment of the principles

and practice of school teaching. The text-books used in this course are Putnam's Manual of Pedagogics, Gregory's Seven Laws of Teaching, White's School Management, Prince's Courses and Methods. The course is open to all students who are permitted by the rules of the University to take elective courses. Professor McCONNELL and Mr. DORCAS.

Throughout the year, five hours a week.

2. Philosophy of Education and Practice of Teaching. Lectures and recitations. It is the purpose in this course to set forth the aims of education, as these aims have been developed in educational history, also to treat somewhat fully the doctrines of the educational leaders of recent times, and finally to illustrate the application of these doctrines in teaching. Fall term: Educational Aims and Doctrines. This part of the course will include a special treatment of the Herbartian Pedagogy and a discussion of educational values. Winter term: Teaching and Governing. This part of the course will embrace a treatment of the Formal Steps of Instruction, an exposition of methods of teaching and lectures on sanitation. Spring term: Secondary Education. In this part of the course, attention will be given to the organization of courses of study and methods of instruction in high schools. Professor McCONNELL.

Throughout the year, three hours a week.

3. History of Education. This course will consist of three distinct parts. (*a*) The ancient and mediæval period, (*b*) the modern period, and (*c*) the history of education in the United States. The course will consist of lectures, recitations and essays on assigned topics. Mr. DORCAS.

Throughout the year, two hours a week.

4. School Supervision. In this course the student will be expected to make a study of the following subjects: General school management, the art of classifying schools, and the art of arranging courses of study. Lectures and recitations. Professor McCONNELL.

Winter term, two hours a week.

5. School Systems. This course will require of the student an examination of the state and city systems of the United States. Lectures and reports. Professor McCONNELL.

Fall term, two hours a week.

6. **Child Study.** In this course the history, literature and methods of work in child study will be treated. Professor McCONNELL.

Spring term, two hours a week.

7. **Seminary.** The Seminary will afford an opportunity for the special investigation of subjects selected with reference to their bearing on Courses 2 and 6. Fall and winter: The doctrines of the Herbartian school. Spring: Child study. Professor McCONNELL.

Throughout the year, two hours a week.

NOTE.—The courses in Pedagogy, except as otherwise designated, are open to Juniors, Seniors, and special students. Candidates for the degree of Bachelor of Didactics are required to take three full terms' work in Pedagogy.

State Certificate. Acting under a law passed by the Twenty-third General Assembly, the State Board of Educational Examiners will grant state certificates, good for five years, to graduates of the Collegiate Department of the University who comply with the following conditions:

(*a*) The applicant must take three full terms' work in Pedagogy at the University.

(*b*) He must furnish written statements, prepared expressly for the Board, from one or more county superintendents, or other experienced educators, certifying to the professional success and good moral character of the applicant.

(*c*) He must furnish written official statements, addressed to the Board, from school boards, or directors, for whom the candidate has taught, certifying to his success in teaching and government.

(*d*) He must apply to the Board through the Professor of Pedagogy, to whom he shall send, in addition to the above described certificates, a formal application for a state certificate, the sum of three dollars and such other credentials as may be required. The application for a state certificate should be made by using the blank form provided for that purpose by the State Board of Educational Examiners.

(*e*) All the papers and credentials required from candidates for state certificates must be filed with the President of the University at least thirty days before the date fixed for the examination.

Life Diploma. The State Board of Educational Examiners grants

life diplomas, according to law, to graduates of the University who have complied with the state certificate conditions mentioned above, and who, in addition thereto, have had a successful teaching experience of five years after graduation. Applications are to be made through the Professor of Pedagogy. The following are the regulations of the Board in reference to applicants for life diplomas.

(*a*) The Board itself holds the right, which it exercises at discretion, to investigate the character, scholarship, and professional standing of every applicant.

(*b*) The candidate must present an original thesis *in his own handwriting*, of not less than 3,000 nor more than 5,000 words, upon some professional topic selected by the President of the Board. The thesis will be subjected to a critical examination by at least two persons chosen by the Board.

(*c*) The credentials required, the registration blank properly filled, and the thesis, accompanied by the fee of five dollars, must be filed with the President of the University at least thirty days before the date fixed for examination.

PHYSICS.

PROFESSOR VEBLEN; MR. BOWMAN, MR. LORENZ, MR. GRIMES.

1. **Mechanics and Heat.** Lectures and recitations. Professor VEBLEN.

Fall term, daily at 11.

2. **Electricity and Magnetism.** Lectures and recitations. Professor VEBLEN.

Winter term, daily at 11.

3. **Sound and Light.** Lectures three times a week, laboratory work twice a week. Professor VEBLEN, Mr. BOWMAN, and Mr. LORENZ.

Spring term, lectures Mon., Wed., Fri., at 11.

Courses 1, 2 and 3 constitute the general elementary work in physics required of all scientific and engineering students, and must be preceded by the mathematics of the Freshman year.

4. Physical Measurements and Observations. Laboratory work. Mr. BOWMAN and Mr. LORENZ.

One term, daily.

5. Measurements and Determination of Constants. Lectures and laboratory work. Professor VEBLEN, Mr. BOWMAN and Mr. LORENZ.

One term, daily.

6. Measurements. Special investigation and research to follow 4 and 5. Professor VEBLEN and Mr. BOWMAN.

Courses 4, 5 and 6 may be taken any term, but must be pursued in the order of their numbers. These courses are planned for students taking a second year in Physics. Course 4 is required of electrical engineering students in the fall of their Junior year. In the winter of the same year they take 5, but in their case this course deals more especially with electrical measurements.

7. Direct Current Dynamos and Motors. Three lectures a week, laboratory work twice a week. For electrical engineering Juniors. Professor VEBLEN and Mr. BOWMAN.

Spring term, daily.

8. Theory of Electricity and Photometry. Lectures five times a week, laboratory work ten hours. Professor VEBLEN and Mr. BOWMAN.

Fall term.

9. Alternate Current Machinery. Five lectures a week, ten hours of special laboratory work. Professor VEBLEN, Mr. BOWMAN, and Mr. LORENZ.

10. Distribution of Electrical Energy; Telegraph and Telephone. Lectures and laboratory work. Professor VEBLEN and Mr. BOWMAN.

Spring term, ten hours a week.

The last three numbers form the Senior year course of the electrical engineers, and will in general include five lectures a week, the subjects treated being indicated above. The work in the laboratory consists of practice with the photometer, experiments and measurements on the various machines, transformers, and other apparatus, and tests of insulators, conductors, samples of iron, etc. The student has the

choice in the latter part of the year of preparing a thesis or carrying out some research, or doing other special work.

11. **Electricity and Magnetism.** For civil engineering students. Two lectures a week, laboratory work three times a week. Professor VEBLEN and Mr. LORENZ.

Fall term, daily.

12. **Dynamo-electric Machinery.** Lectures to civil engineering students. Professor VEBLEN.

Winter term, three times a week.

13. **Heat and Thermodynamics.** Lectures to Junior electrical and civil engineering students. Mr. BOWMAN.

Spring term, twice a week, with one day each week in electrical laboratory for civil engineers.

14. **Shop Work.** For electrical engineers. Mr. GRIMES.

Throughout the year, twice a week.

15. **Seminary.** The systematic reading of physical and electrical journals by those students who are well enough equipped, is encouraged by a weekly Seminary, conducted for this purpose by Professor VEBLEN.

In addition to the above, lectures and laboratory courses in selected topics will be given as circumstances may require or the facilities for instruction may admit. Laboratory work of any grade may be taken any term, three or more times a week.

CHEMISTRY.

PROFESSOR ANDREWS; MR. WALKER, MR. JACKSON.

1. **General Chemistry.** Lectures illustrated by experiments and accompanied by a weekly quiz and laboratory work. Professor ANDREWS.

Fall term, four times a week, laboratory once a week.

2. **General Chemistry** (*Continued*). Lectures illustrated by

experiments. Introduction to qualitative analysis. Laboratory work, six hours a week. Professor ANDREWS and Mr. WALKER.

Winter term: Lectures Tu., Th., at 9. Laboratory at hours to be arranged.

3. **General Chemistry and Qualitative Analysis.** Lectures once a week, laboratory work eight hours. The student is instructed in the theory and practice of qualitative analysis and is expected to carry out about twenty-five complete analyses besides a number of partial ones. This course except the lectures can be taken in any term. Professor ANDREWS, Mr. WALKER and Mr. JACKSON.

Spring term, lectures at 9, laboratory eight hours, at times to be arranged.

4. **Quantitative Analysis.** Lectures on general principles and sources of error, once a week, laboratory ten hours. Professor ANDREWS and Mr. JACKSON.

Lectures Tu., at 4:30, laboratory according to arrangement.

5. **Quantitative Analysis.** Laboratory practicum. The student extends his work from the analysis of substances of definitely known composition to commercial products of various kinds and makes a study of certain technological methods. Professor ANDREWS and Mr. JACKSON.

Any term, ten hours a week.

6. **Theoretical and Physical Chemistry.** Lectures on the general principles of thermo-chemistry, electro-chemistry and chemical dynamics, accompanied by a parallel course of laboratory work covering, for example, the determination of molecular weights, experimental study of the laws of Avogadro and Dulong and Petit, the phenomena of mass action and of dissociation. Ostwald's Outlines of Physical Chemistry has hitherto been used as an auxiliary text. This course must be preceded by at least the first three courses in chemistry and the first three in physics or their equivalent. It will probably only be given in the even numbered years. Professor ANDREWS.

Spring term, lectures or laboratory work daily at hours to be arranged for.

7. *a.* **Organic Chemistry.** Lectures on the fatty series, illus-

trated experimentally so far as the subject will permit. Professor ANDREWS.

Winter term, even numbered years, twice a week.

7. *b.* **Organic Chemistry.** Lectures on aromatic and heterocyclic compounds. Professor ANDREWS.

Spring of odd numbered years, three times a week.

8. **Electro-chemistry.** Lectures for students of electrical engineering, comprising the theory of electrolysis, chemistry of primary and secondary batteries, electro-metallurgy and other industrial applications. Professor ANDREWS.

Spring term, five times a week, even numbered years only.

9. **Organic Preparations.** Laboratory work comprising preparation of typical organic compounds, methods of synthesis and study of diagnostic reactions. This course must be preceded or accompanied by Course 7. Professor ANDREWS.

Winter term, laboratory daily, twelve hours a week. This course may also be taken as a minor, six hours a week in winter and spring terms, accompanying Courses 7 *a* and 7 *b*.

10. **Determinative Mineralogy and Crystallography.** Laboratory practicum. Mr. WALKER.

Winter and spring, five times a week.

Numbers 3, Qualitative Analysis, and 4, and 5, Quantitative Analy sis, may by taken in either fall, winter, or spring term.

Number 6, may be taken after 3. This order is only recommended to those who devote no more than four terms in all to chemistry.

ANIMAL MORPHOLOGY AND PHYSIOLOGY

PROFESSOR HOUSER; MR. BURGE.

1. **General Morphology and Physiology.** A laboratory course for the study of selected types representing the several great groups of animals. General biological phenomena, the unicellular animals, and representatives of the higher invertebrate groups. Fall

term.—Dissection of typical vertebrates, the microscopic morphology of vertebrates, and lectures and experiments covering the elements of physiology. Winter and spring terms. Professor HOUSER and Mr. BURGE.

Throughout the year, daily; two divisions, 10 to 12 and 1:30 to 3:30.

2. **Comparative Histology.** This is a course in the comparative histology of animal tissues and systems of organs. Emphasis is here given to the laboratory technique of histology. To this end the student is expected to become proficient in the standard methods of fixing, staining, imbedding, sectioning, mounting, and the other processes incident to the making of microscopical preparations. Prerequisite: Course 1. Professor HOUSER and Mr. BURGE.

Fall term. Laboratory four days a week, 1:30 to 3:30. Lectures Fri., at 8.

3. **Comparative Neurology.** A course for the detailed study of the nervous system. The laboratory work involves the use of the special technique of Golgi, Nissl, Weigert, and Ehrlich. The architecture of the nervous system is presented in a series of lectures and demonstrations. The texts of all the stardard authorities are used for reference and for assigned reading. Prerequisite: Courses 1 and 2. Professor HOUSER and Mr. BURGE.

Winter term. Lectures Mon., Fri., at 8. Laboratory Tu., Wed., Th., 1:30 to 3:30.

4. **Vertebrate Embryology.** Laboratory work, accompanied by a series of lectures. The lectures discuss the general problem of vertebrate embryology, and are supplemented by collateral reading. The laboratory work embraces an examination of the frog's egg during its early cleavage, and a study of the chick at successive stages of development during the first four days of incubation. Prerequisite: Courses 1 and 2. Professor HOUSER and Mr. BURGE.

Spring term, daily, ten hours a week.

5. **Advanced Morphology.** Special courses of laboratory work will be arranged to meet the needs of those who desire to pursue morphological studies farther than the outlined Courses 1, 2, 3 and 4. Opportunities are offered for investigation in some branch of anatomy, histology, or embryology. Professor HOUSER.

Throughout the year, ten hours a week.

6. **Advanced Physiology.** A course for advanced students who desire to continue the investigation of physiological processes in greater detail. Laboratory work and library research. Prerequisite: Course 1. Professor HOUSER.

Throughout the year, three times a week.

ZOOLOGY.

PROFESSOR NUTTING; ASSISTANT PROFESSOR WICKHAM.

1. **Invertebrated Animals**—more especially the sub-kingdoms, *Cœlenterata, and Echinodermata.* Professor NUTTING.

Fall term, daily.

2. **Mammalia.** The principles of classification are here applied to a more limited group. More attention is paid to generic and specific characters and more detailed descriptions are made, daily practice being afforded by the use of the magnificent series of mammals in the Hornaday collection and main Museum. Instruction in the preparation of skulls and skeletons is given to those students desiring it. Professor NUTTING.

Winter term, daily.

3. **Ornithology,** including instruction in field work. Upon this course the whole work in systematic zoology is centered. Owing to the very large series of birds (about 11,000 specimens) in the Museum, there is ample material for real systematic work during the term. Professor NUTTING.

Spring term, daily.

4. **Entomology.** Insect Anatomy and development. Lectures and laboratory work. Assistant Professor WICKHAM.

Fall term, three hours a week.

5. **Entomology.** The principles acquired in the preceding term, will be applied to the study of systematic entomology. Assistant Professor WICKHAM.

Winter term, three hours a week.

6. Entomology. The studies of the preceding term will be continued. Throughout this and the preceding course special attention will be given to the philosophical bearings of the subject. Assistant Professor WICKHAM.

Spring term, three hours a week.

7. Lectures in Speculative Zoology. This course is devoted to a presentation of the more prominent theories concerning the origin and evolution of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts and intelligence of animals. The course will will be open to Juniors and Seniors. Professor NUTTING.

Throughout the year, two hours a week.

8. Thesis. Equivalent to two terms' work. Advanced work in any group of animals of which the Museum contains a sufficient series. Free access to any specimens or books on the museum floor is accorded to students doing thesis work in zoology, and a convenient study room has been fitted up for the use of advanced students.

The above courses are intended to be consecutive, except that Courses 4, 5 and 6 may follow 1, 2 and 3, in Animal Morphology, and 7 may be taken by Juniors and Seniors, without previous work in natural science. A combination of Courses 4, 5, 6 and 7 is recommended for students desiring a five hours' course which will include a critical study of a definite group of animals together with the application of biological principles elucidated in Course 7. This course is more particularly designed in the interest of students who do not intend to specialize in zoology.

The Museum affords an abundance of material for study, and this is supplemented by (*a*) library of zoological works; (*b*) photographs of specimens studied, the photographs to be placed in the note books along with the descriptions; and (*c*) lectures in which the salient points of the various groups of animals are defined, and habits, distribution, etc., described.

Students taking special courses in biological science may receive instruction in field work and in the preparation of museum material.

GEOLOGY.

PROFESSOR CALVIN.

1. **Principles of Geology.** Lectures, illustrated by museum specimens, views, maps and microscopic preparations.

Throughout the year, twice weekly, Tu. and Th., at 9.

This course may be supplemented with Course 1 in Astronomy.

2. **General and Practical Geology.** During the fall term this course embraces lectures and field observation on the geological phenomena in the vicinity of Iowa City as an introduction to the fundamental facts of the science. The preliminary work also embraces the laboratory investigation of material collected during studies in the field. This is followed by the general facts of rock-making, continent-making, and the evolution of topographic forms. During the winter and spring terms attention is given to the chronological succession of strata in the Mississippi Valley, with studies relating to the genesis, lithology, geographical distribution, economic products, and typical faunas of the several formations. Large series of rocks, minerals, fossils, maps, lantern slides, and photographs afford the material for lecture illustration and laboratory study.

Throughout the year, daily at 10. Additional hours for laboratory work arranged to suit the convenience of the individual students.

3. **Invertebrate Paleontology.** Lectures and laboratory research.

Throughout the year, daily. Lectures at 8. Laboratory work at convenient hours from 8 to 5.

4. **Economic Geology of the United States.** Lectures, with library and laboratory research.

Throughout the year daily.

5. **Special Courses in Pleistocene Geology,** local Geology and Paleontology, Characteristics and Faunas of Special Formations, and similar subjects are arranged to meet the wishes of individual students.

Throughout the year or through a single term, two, three, or five hours weekly.

BOTANY.

PROFESSOR MACBRIDE; ASSISTANT PROFESSOR SHIMEK.

1. **General Botany.** A course of popular lectures and special studies intended to illustrate the purpose, method and scope of present botanical research, the progress of botanical science in recent years and the general economic importance of the subject. The lectures are illustrated by material from the Herbarium and the field and no effort is spared to give the course the highest practical value. This course, though intended primarily for those intending to teach, is open to all students; it is complete in itself, but will be accepted as one of the three required terms in the case of those who elect Botany as material science. Professor MACBRIDE.

Spring term, five hours a week.

2. **Morphological Botany.** This course consists of lectures and laboratory work and is intended to illustrate the structure and life-history of the several types presented by the vegetable kingdom. Goebel's Outlines of Classification is used as text. Special attention is paid to all available forms of our cryptogamic flora; slime moulds, schizophytes, diatoms, algae, fungi, mosses, ferns and their allies are successively passed in review. This course is open to all students who are credited with Botany in their preparatory course. While it is in some particulars a review of the preparatory courses, it is also made the basis of work in the subsequent courses. Professor MACBRIDE and Assistant Professor SHIMEK.

Fall term, ten hours a week.

3. **General Plant Histology. General Structural Botany.** This course requires ten hours a week in the laboratory. Daily lectures accompany the laboratory work. The student receives special instruction in the preparation of vegetable sections, staining, mounting, etc., and is required to prepare for himself approved slides in illustration of all the topics presented in so far as these are referable to the microscope. Professor MACBRIDE and Assistant Professor SHIMEK.

Winter term, daily.

4. General Plant Physiology. This course consists of lectures, laboratory work and experiments, supplemented by collateral reading. The most important problems of vegetable physiology are discussed and illustrated by simple experiments. Detmer, Vine, Darwin, and all other standard authorities are available to the student for collateral reading. Assistant Professor SHIMEK.

Spring term, daily.

5. General Mycology. This is a course in the fungi and consists of laboratory work, supplemented by lectures, experiment and collateral reading. This is an advanced course. Students make and classify collections for themselves. In identifying material collected, students are aided by extensive mycological literature, *exsiccati*, etc. Professor MACBRIDE.

Fall term, daily.

6. Vegetable Embryology. A special course with lectures and laboratory work, including collateral reading. This course is confined chiefly to the consideration of the embryology of phenogamous plants. Phytocytology is taken up incidentally, and the peculiarities of nuclear division and karyokinesis noted. Professor MACBRIDE.

Spring term, daily.

7. Special work in Morphology. A course designed for advanced students either graduate or special, offering opportunity for more exact investigation. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

8. Special Systematic work. The large collections of the University now afford unusual opportunity for the special study of particular groups and families, and students are invited to engage in original research in the revision of accumulated species. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

9. Special Applied Botany. A course for students of Pharmacy and Medicine. The officinal *Materia Medica* is made the basis of the special study of medicinal plants, their nature, origin and relationships. Professor MACBRIDE.

Winter and spring terms.

10. **Thesis Course.** Designed for such students, either graduate or others, as desire to undertake problems of original research. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

11. **Seminary.** A special course in reading and study of current literature is arranged for such students as have completed at least three courses in Botany. Students are expected to present written reviews and criticisms of the literature presented, to engage in discussion of topics specially assigned, and to carry forward at appropriate seasons special investigations in the field as directed. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year, one hour a week.

MATHEMATICS.

PROFESSOR WELD; ASSISTANT PROFESSOR SMITH, MR. BAUER, MR. MERRITT.

Classical and philosophical students are required to take Course 1. Course 2 may, however, be substituted for this and the work otherwise required in Ancient History. Scientific students must take Course 2. The work of Course 3, though not required, is arranged with reference to the needs of those students who expect to do special work in physical science. Civil and electrical engineering students are required to take Courses 2, 3 or 4, and 9. Further explanations will be found in connection with the following syllabus.

Freshman Mathematics for Classical and Philosophical Students.

1. *a.* **Algebra.** Exercises in the statement and solution of problems involving simple and quadratic equations; ratio, proportion, and variation; arithmetical, harmonic, and geometrical progressions; properties of series and the development of simple functions into series; the binominal theorem; logarithms. Fall term.

1. *b.* **Plane Trigonometry.** Trigonometric functions and formulæ; logarithmic functions; solution of right and oblique angled triangles; practical applications. Winter term.

1. *c.* **Analytical Geometry.** The point, right line, circle, parabola ellipse and hyperbola in cartesian coordinates. Spring term.

Three divisions; throughout the year, Mon., Wed., Fri., at 11, 2:30, and 3:30. Mr. BAUER and Mr. MERRITT.

Students contemplating advanced study in Mathematics should take Course 2, instead of the one here outlined.

Freshman Mathematics for Scientific and Engineering Students.

2. *a.* **Algebra and Trigonometry.** In algebra the work is nearly the same as that of 1 *a*. This is to be completed by November 11th and will be followed by Plane Trigonometry. Fall term.

2. *b.* **Trigonometry and Theory of Equations.** Trigonometry is to be completed by January 27th. The work in the Theory of Equations will include the study of imaginaries, the properties of the general equation and their graphical representation, methods of approximating to the roots of higher equations with numerical coefficients, Cardan's solution of cubics, and bi-quadratic equations. Winter term.

2. *c.* **Analytical Geometry.** The same as Course 1 *c*, with the addition of the discussion of the general equation of the second degree between two variables and examples of higher plane curves. Spring term.

Five divisions, daily. throughout the year at 8, 9, 10 and 2:30. Assistant Professor SMITH, Mr. BAUER and Mr. MERRITT.

Sophomore Mathematics for Scientific Students.

3. *a.* **Differential and Integral Calculus.** The fundamental principles of the Calculus are studied and applied to the solution of problems in geometry and mechanics. Fall term.

3. *b.* **Integral Calculus and Method of Least Squares.** Winter term.

3. *c.* **Applications of the Method of Least Squares.** This is a continuation of the preceding, the method of least squares being applied to the reduction of various series of physical observations. Spring term.

This course is open only to those who have taken Course 2. Assistant Professor SMITH.

Daily, throughout the year at 8.

Sophomore Mathematics.

4. *a.* **Analytical and Modern Geometry.** A review of those portions of Course 2 *c* which are supplementary to Course 1 *c*, followed by Analytical Geometry of three dimensions. A short course of lectures on Modern Geometry is given, upon which full notes must be submitted. Fall term.

4. *b.* **Differential Calculus.** Winter term.

4. *c.* **Integral Calculus.** The work in Calculus in this course is nearly the same as that in Course 3. Spring term.

This course is intended primarily for engineering students but is open to all who have completed the required work of the Freshman year. Professor WELD.

Daily, throughout the year, at 10.

Mathematics for Junior, Senior and Graduate Students.

5. **Integral Calculus.** *a.* Hyperbolic Functions and Definite Integrals. Fall term. *b.* The Eulerian and Elliptic Integrals. Winter term. *c.* Differential Equations. Spring term. An elementary course open to all students who have taken either Course 3 or 4. For either undergraduate or graduate students. Professor WELD.

Three hours a week throughout the year, Mon., Wed., Fri., at 11.

6. **Differential Equations.** Lectures. The subject is to be treated from the standpoint of Sophus Lie. For graduate students. This course will not be given in 1898-99. Professor WELD.

Two hours a week, throughout the year, Tu., and Th., at 8 or 11; supplemented by a weekly Seminary.

7. **Harmonic Functions.** Lectures. For graduate students. Professor WELD.

Two hours a week, throughout the year, Tu., and Th., at 8 or 11; supplemented by a weekly Seminary.

8. **Determinants and Modern Geometry.** For either undergraduate or graduate students. *a.* Determinants and the Theory of

Quantics. Fall term. *b.* Modern Geometry; the principle of *Invariance*. Winter term. *c.* Modern Geometry of three dimensions, or Quaternions. Spring term. Mr. BAUER.

Two hours a week, throughout the year, Tu., Th., at 2:30; supplemented by a fortnightly Seminary.

9. **Analytical Mechanics.** *a.* Statics. Composition and resolution of forces; the funicular polygon; centers of gravity; moment of inertia; friction; etc. Fall term. *b.* Kinetics. Rectilinear motion; projectiles; constrained motion of a particle; the simple and conical pendulums; etc, Winter term. *c.* Mechanics of fluids. An elementary course. Spring term. For either undergraduate or graduate students. Required of civil and electrical engineering students. Assistant Professor SMITH.

Two hours a week, throughout the year, Tu., Th., at 11; supplemented, for civil engineering students, by a three hours' course in applied mechanics in charge of Assistant Professor MAGOWAN (See Course in Civil Engineering) and, for special students in mathematics, by a weekly Seminary.

10. **Advanced Analytical Mechanics.** *a.* Problems in statics and dynamics; virtual velocities; the principle of least action, etc. Fall term. *b.* The dynamics of a particle, with special reference to the theory of orbital motion. Winter term. *c.* Hydromechanics. Spring term. For graduate students. Assistant Professor SMITH.

Three hours a week throughout the year, Mon., Wed., Fri., at 11; supplemented by a weekly Seminary.

ASTRONOMY.

PROFESSOR WELD; MR. ———.

The courses in Astronomy are open to all Juniors and Seniors. The two here offered may be taken simultaneously or in succession. Others will be added as soon as necessary arrangements can be made. The University is provided with a small but well equipped students' observatory. See Material Equipment.

1. **General Astronomy.** A course of lectures on descriptive astronomy for the general student. This course may be supplemented

by Course 1 in Geology, which is given at the same hour. Professor WELD.

Three lectures a week, throughout the year, Mon., Wed., Fri., at 9.

2. Practical Astronomy. The student is taught the use of the sextant, transit instrument, clock, chronograph, etc.; the arrangement of the *American Ephemeris and Nautical Almanac;* and the general principles of time, latitude, longitude, and azimuth determination. Professor WELD and Mr. ———.

Two hours a week, throughout the year, Tu., Th., at 9; supplemented by work at the observatory.

CIVIL ENGINEERING.

PROFESSOR SIMS; ASSISTANT PROFESSOR MAGOWAN, Mr. HARTMAN.

All the subjects will be given at definite hours, and students will not be allowed to substitute other subjects for the required civil engineering studies without the approval of the professor in charge and special permission of the Faculty. Students in one class will not be allowed to take subjects in an advanced class without permission of the professor in charge.

So far as possible, instruction will be given by recitation from text-books. But where this method is not practicable, as in limes and cements, and in some of the subjects treated under the head of Civil Engineering, a text will be followed, the first part of the recitation period being devoted to quiz, and the remainder to a lecture.

Saturdays, throughout the four years of the course, are devoted in part to field work, photography and blue printing—including the sensitizing of paper; also to work in the carpenter shop. The latter consists chiefly in making models of the structures designed in the Senior year, and in practical joinery. For all work requiring no special preparation outside of the class room, such as drawing, field work, laboratory exercises, some of the work in graphical statics, etc., not less than two hours will be required for one hour of credit.

French or German. See Course 1, under French, page 44; and Courses 1 and 2, under German, page 42. If French be elected in the Freshman year, English must be taken in the Sophomore year; but should German be elected, it must be continued through the Sophomore year. Freshman year, five hours a week, and Sophomore year, three hours a week.

Mathematics. See Courses 2, 3, or 4 and 9, under Mathematics, pages 76, 77 and 78. Freshman and Sophomore years, five hours a week.

English. See Courses 1 and 4, under English, pages 46-47. For those electing French, two hours a week through the Freshman, and three hours a week through the Sophomore year; and for those electing German, two hours a week through the Freshmen year.

Drawing. For general scientific, electrical and civil engineering students. Geometrical and mechanical drawing. Orthographic, oblique, isometric and cabinet projections, and lettering. Linear perspective, shades and shadows. The work is given principally by means of personal instruction. The preliminary principles are studied from text and reference books and their application is employed in making drawings from models and machinery to exact scale. Assistant Professor MAGOWAN and Mr. HARTMAN.

Freshman year, fall and winter terms, five hours a week.

Elementary Machine Drawing. For electrical engineers. A study in delineation of brackets, shaft-hangers, screws, pillow-blocks, gearing and other elementary parts of machines. Assistant Professor MAGOWAN and Mr. HARTMAN.

Freshman year, spring term, three hours a week.

Elementary Surveying. For civil and electrical engineering students. The construction, adjustment and use of the compass, level and transit. Field practice in surveying, platting of notes and computation of areas. Assistant Professor MAGOWAN and Mr. HARTMAN.

Freshman year, spring term, five hours a week for civil, and two hours a week for electrical engineering students.

Land Surveying. Recitations and lectures, and field work with transit, level and solar compass; making profiles, leveling and drainage surveys. A section of land is surveyed and the location of all

natural and artificial features determined and noted. Assistant Professor MAGOWAN and Mr. HARTMAN.

Sophomore year, fall term, five hours a week.

Mapping and Surveying. Pen topography, including the making of topographical symbols; platting of section survey from notes taken during the previous term, and making a finished map of the same. United States public land surveys, determination of true meridians, and a study of the rules and Supreme Court decisions governing re-surveys and re-locations of lost or obliterated corners. Assistant Professor MAGOWAN.

Sophomore year, winter term, three hours a week.

Topographical Surveying and Mapping. A study of the adjustments and methods of use of the stadia, gradienter and plane table, etc., and the making of finished contour maps from notes of surveys made by the students, with the above mentioned instruments. Assistant Professor MAGOWAN.

Sophomore year, spring term, three hours a week.

Descriptive Geometry. The work in this study includes problems on the point, line, and plane; also the simpler geometrical solids, shades and shadows, single and double curved and warped surfaces, and the generation and development of the same, and the solution of various practical problems.

Sophomore year, winter and spring terms, two hours a week.

Electricity and Magnetism. See Course 2, under Physics, page 64. This course is designed especially for the students in Civil Engineering, the object being a better general understanding of this important subject, both in general theory, and in the practice of making electrical measurements; also to give a more thorough knowledge of electricity preparatory to taking up the study of the dynamo and motor, in the winter term, the importance of which to the Civil Engineer is fully appreciated, and the subject is adequately given.

Junior year, fall term, five hours a week.

Analytical Mechanics. See Mathematics, Course 9, page 78.

Junior year, fall and winter terms, two hours a week.

Mechanics of Materials. For students in civil and electrical engineering. The treatment of this subject is designed to be such

that the student shall acquire a thorough training in the elementary principles of the Mechanics of Materials, and he is then required to verify by his own investigations, the experimental laws and many of the derived formulæ. Numerous problems taken from actual engineering practice are given for solution from time to time, in order that the student may be trained in the application of his knowledge. The study includes the resistance and elasticity of materials, resistance of pipes and riveted joints, bending and resisting moments, shears, elastic curve, deflection of simple, cantilever, restrained and continuous beams; strength of columns with concentric and eccentric loading, torsion and shafting and combined stresses, etc. Assistant Professor MAGOWAN.

Junior year, three hours a week, fall and winter terms.

Railroad Curves. The study of simple and compound curves and turn-outs. Enough field work is given to familiarize the student with the field methods of locating and running curves. Mr. HARTMAN.

Junior year, fall term, three hours a week.

Steam Engine and Locomotive. The subject is treated under four heads, Heat, Steam, Engine, and Boiler. Under Heat is treated the economic combustion of fuel. Under Steam the physical properties and the energy contained. Under Engine, the modern types of simple and compound engines are discussed, with special reference to the locomotive. The students are given practical problems and are required to ascertain the indicated horse power from actual indicator cards, and to determine the efficiency of various engines from assigned data. The modern types of boilers are then discussed. Compressed air is also considered in connection with the transmission of power. Professor SIMS.

Junior year, fall term, two hours a week.

Graphical Statics. The course is so arranged that the study of the graphical method of determining stresses precedes that of the analytical method, it being the intention to assist the student to secure a mental photograph of the amount and kind of stress in the various members of structures, and thus provide him with a ready and impressive means of their comparison. The analysis, by this method, of

roof trusses is first taken up, followed by that of the plate girder, and simple, cantilever and swing bridges, with parallel and inclined chords, under various conditions of loading as required in the standard specifications, both for actual wheel concentrations and equivalent uniform loads; after which a course is given in metal and masonry arches. Professor SIMS and Assistant Professor MAGOWAN.

Junior year, fall, winter and spring terms, three hours a week.

Dynamo-Electric Machinery. See Physics, Course 12, page 66. The importance of an elementary knowledge of this subject to the civil engineer in general practice is fully appreciated, and the course is designed to give the students a comprehensive knowledge of the laws governing the construction and operation of the dynamo and motor.

Junior year, winter term, three hours a week.

Theory of Stresses. Including the analytical determination of stresses and strains in all the structures analyzed by the graphical method. (See Graphical Statics.) Much time and study is devoted to this important subject. Professor SIMS.

Junior year, winter term, three hours a week; and spring term, five hours a week.

Limes and Cements. The instruction in this subject consists in assigned references, and a course of lectures on the principal properties of limes, hydraulic limes, and natural and artificial cements, with a general discussion of the nature and uses of concrete, followed by laboratory work. Each student is required to make and test briquettes of various cements, which will be furnished him for the purpose, and to calculate their relative values per unit of strength. Professor SIMS.

Junior year, winter term, two hours a week.

Civil Engineering. This subject is given by recitations and lectures, and is designed for the purpose of instruction in the practical application of the theoretical principles of Civil Engineering. The regular recitations and lectures frequently will be interrupted by designs and estimates of the cost of the work under discussion. The subjects treated, with thoroughness commensurate with their relative importance, are: railway reconnaisance and location; theory of maximum economy in grades and curves; location of highways and resistance to traction thereon; hydrography; building materials; natural and

artificial stones; quarrying and blasting; reaching deep foundation beds in earth, quick sand, water and silt, with pneumatic tubes, caissions and coffer dams, and by the Poetsch-Sooysmith freezing process; ordinary earth work and methods of computation; masonry, classification of, and specifications for; theory and practice of retaining walls; earth, loose rock and light masonry dams and weirs; the construction of brick, masonry, and concrete arches; tunneling and the use of explosives; highway and street construction; railroad construction and maintenance of way; improvement of rivers and harbors and canal transportation; street railways and comparison of street motors. In all, 180 recitations, lectures, and exercises. Professor SIMS.

Senior year, fall term, four hours a week; winter and spring terms, three hours a week.

Hydraulics. Instruction in this work is given by means of lectures, recitations, and laboratory work. The course includes the weight and pressure of water; head and center of pressure; computation and measurement of velocity and discharge through orifices, weirs, pipes, conduits, canals, and rivers, the investigation of meters and motors and the determination of water power. Assistant Professor MAGOWAN.

Junior year, spring term, five hours a week.

Heat and Thermodynamics. See Course 13, under Physics, page 66. Junior year, spring term, three hours a week.

Chemistry. See Courses 1 and 2, under Chemistry, page 66. It will be noticed that this course requires five hours a week in lectures and laboratory work. The students in civil engineering will take only four hours. The hour omitted, however, must be but one of the hours of laboratory work. Senior year, fall and winter terms, four hours a week.

Structural Drawing and Designing. Prior to the work of designing proper, the students are required to make tracings or drawings of existing structures and compare the sections and connections of the various members with standard specifications. This work is followed by the design of trestles, highway and railway bridges, dams, foundations, etc., of which complete working drawings are made. Professor SIMS.

Senior year, fall term, four hours a week. Winter and spring terms, three times a week.

Geology. See Course 1, under Geology, page 72. Senior year, fall, winter and spring terms, two hours a week.

Sanitary Engineering. The work offered under this course includes principally, sewers and sewerage, and the cleaning of cities and towns. The separate and combined systems of sewers are studied and discussed. The details of various sewer systems as set forth in plans and specifications for their construction are carefully studied. The cost of construction as taken from current contract prices is especially noted, and the arrangement and action of plumbing fixtures are incidentally studied. The growing importance of this subject is fully realized, and it is the intention to keep the instruction fully abreast of the demands and needs of the present, and if possible, anticipate future needs and methods. Assistant Professor MAGOWAN.

Senior year, fall and winter terms, two hours a week.

Resistance of Materials. For civil and electrical engineers. This subject includes the strength and resistance of engineering materials, their behavior under stress, and the demonstration of the experimental laws, ultimate strength, elastic limit, etc., by tests in the laboratory. Professor SIMS.

Junior year, winter term, two hours a week.

Water Supply Engineering. A study of the methods of collecting, purifying, storing, and distributing water. Assistant Professor MAGOWAN.

Senior year, spring term, three hours a week.

Specifications and Contracts. A study of various standard specifications and a discussion of the effect of general causes in contracts on same. Professor SIMS.

Senior year, spring term, four hours a week.

Thesis. At the close of the spring term of the senior year, an acceptable original thesis may be required from each student before graduation.

For more detailed information and description of course send for special announcement of Civil Engineering.

MILITARY SCIENCE AND TACTICS.

LIEUTENANT ELY.

Instruction in this department is prescribed for all male students of the Collegiate Department, except such as are especially excused. Students who, for any valid reason, may desire to be excused must appear in person before the military committee consisting of the commandant and five student captains, on the Monday immediately succeeding the beginning of each term, at the Armory at 11 a. m. Those who claim exemption on account of physical disability, when the same is not apparent, must present to the committee a certificate from the battalion surgeon. All students not specially excused will report to the Professor on the Monday immediately following the beginning of the term, at the Armory, at 1:00 p. m.

ORGANIZATION.

The students are organized for instruction into a battery of artillery consisting of two gun detachments and an infantry battalion consisting of four companies, a band and the necessary staff officers. The commissioned officers are selected from the Senior, the sergeants from the Junior, the corporals from the Sophomore class. The officers and non-commissioned officers are selected for character, military record, knowledge of the drill regulations and general aptitude.

UNIFORM.

But one style of uniform is worn, known as the undress or fatigue uniform. It consists of a dark blue suit and is to be worn on all occasions of military duty; it can be procured either before or immediately after being admitted. A detailed description will be furnished on application to the President.

Uniforms can be obtained in the vicinity at a cost of from $12 to $18.

ORGANIZATION OF BATTALION.

1897-98.

STAFF AND NON-COMMISSONED STAFF.

1st Lieutenant and Adjutant.....G. M. Rea.
1st Lieutenant and Quartermaster.....H. E. Taylor.
Sergeant Major.....C. W. Startsman.
Acting Quartermaster Sergeant.....W. B. Chase.
Color Sergeant.....F. C. Neal.

COMPANY "A."

Captain.....F. A. Soleman.
1st Lieutenant.....L. A. Swisher.
2nd Lieutenant.....L. J. Flynn.
1st Sergeant.....H. Carr.
Sergeants.....F. G. White. F. A. Williams. E. E. Hull.
Corporals.....G. W. Egan. P. H. Meggers. T. Kingland.

COMPANY "B."

Captain.....C. H. Carter.
1st Lieutenant.....John Beardsley.
2nd Lieutenant.....M. G. Hilpert.
1st Sergeant.....A. J. Burt.
Sergeants.....C. Horack. L. P. Lee. W. B. Chase. G. L. Schoonover.
Corporals.....C. R. Jones. F. B. Reid. B. Whitcomb. E. R. Mitchell.

COMPANY "C."

Captain.....A. R. Denny.
1st Lieutenant.....R. Otto.
2nd Lieutenant.....E. E. Hobby.
1st Sergeant.....W. W. Loomis.
Sergeants.....C. W. Jarvis. J. W. T. Holt. T. W. Kemmerer.

COMPANY "D."

Captain.....J. R. Frailey.
1st Lieutenant.....Maro Johnson.
2nd Lieutenant.....Oswald Veblen.
1st Sergeant.....E. H. Yule.
Sergeants.....R. D. Blackmore. L. J. Roach. N. B. Barber.
Corporals.....G. F. Harkness. L. Knapp. A. B. Phillips. J. C. Bowman.

BATTERY.

Captain.....F. S. Holsteen.
1st Lieutenant.....W. L. Barker.
2nd Lieutenant.....W. S. Willett.
1st Sergeant.....LeRoy Weld.
Gunners.....B. Swisher. W. S. Ankeney.

COURSE OF INSTRUCTION IN MILITARY SCIENCE AND TACTICS.

The course of instruction is both practical and theoretical.

First Year. Practical instruction; three hours a week, spring and fall terms, 1:15 to 2:15; one hour a week, winter term, 4:30 to 5:30. Practical instruction in infantry, school of the soldier, company and

battalion; extended order and ceremonies; rifle firing at 100, 200, 300, 500 and 600 yards.

Second Year. Practical instruction: Infantry, same as first year; practical instruction: artillery in service of field guns (foot battery), with mechanical movements and saber exercise; rifle firing, same as first year. Theoretical: winter term, one hour a week, 4:30 to 5:30. Recitations, drill regulations and manual of guard duty.

Third Year. Practical: same as second year. Theoretical: winter term, one hour a week, 4:30 to 5:30. Recitations, service of security and information.

Fourth Year. Practical: same as above. Theoretical: winter term, one hour a week, 4:30 to 5:30. Lectures on the organization of the army of the United States, United States army regulations, preparation of the usual reports and returns pertaining to a company and post. Lectures on military topography and reconnaissance and elementary field engineering.

COURSES OF STUDY FOR GRADUATES.

It is the aim of the University to furnish facilities for advanced study commensurate with the demand for such work. As the number of graduate students has increased, especially of candidates for advanced degrees, the courses of study have been extended to meet their needs. No set courses of study leading to any of the advanced degrees are provided; each candidate for one of these degrees pursues an independent line of study, in which regular University courses are usually combined with special research work, often original in character, laid out with the advice of the professors and carried out under their charge.

The elastic nature of the elective system as here adopted, renders the more advanced courses in many branches as valuable to the graduate as to the advanced undergraduate. The Seminaries, for instance, hold out encouragement and opportunities for a great deal of original study and research. The same thing may be said of a

number of the higher courses in the different departments. In the following pages will be found grouped together those courses which are of special interest to graduates. In every case courses intended for graduates only (B) are distinguished from those open also to undergraduates (A). To the former, undergraduates are admitted only under exceptional circumstances and subject to the discretion of the professor in charge of the work.

LATIN LANGUAGE AND LITERATURE.

A. Courses open both to graduates and undergraduates.

Courses 5, 6, 15, 17. See pp. 39 and 40. Professor CURRIER.

Courses 7, 8, 9, 10, 11, 12, 13, 14. Loc. cit. Assistant Professor POTTER.

Courses 1 to 4 or an equivalent are the minimum prerequisite for work leading to an advanced degree.

B. Courses open to graduates only.

Seminary in Archæology. For 1898–99 the subject will be the Topography and Archæology of Rome and the vicinity. Professor CURRIER.

GREEK LANGUAGE AND LITERATURE.

A. Course open to both graduates and undergraduates.

Plato's Gorgias, Theætetus, and selections from the Republic.

B. Course open to graduates only.

Aristophanes. Special attention will be given to the purpose and influence of Greek comedy, and to its value as a picture of Athenian life.

GERMAN LANGUAGE AND LITERATURE.

A. Courses open to advanced students and graduates only.

5. **German Seminary.** This course is devoted to the study of special periods of German literature, of individual authors or of particular literary movements. See page 43. Professor WILSON.

6. **Middle High German.** Middle High German Grammar, with a comparison of New High German Syntax and Middle High German

Syntax. Selections from the Nibelungenlied, Gudrun and the poems of Walther von der Vogelweide. See page 43. Professor WILSON.

FRENCH LANGUAGE AND LITERATURE.

A. Courses open to both graduates and undergraduates.

4. History of French Literature. Lectures in the French Language. Text-books; Duval's Littérature française; Montaigne's De l'Institution des Enfans. Professor VAN STEENDEREN.

11. Seminary in 13th Century French Literature. Professor VAN STEENDEREN.

ENGLISH LANGUAGE AND LITERATURE.

A. Courses open to both graduates and undergraduates.

During the year 1898–9 candidates for the master's degree may take work in the following Senior courses:

6. Seminary in Nineteenth Century Poetry. See Course 6, under English, p. 47. Professor REEVES.

7. The English Drama. See Course 7, p. 47. Mr. COOK.

10. The English Essayists and Orators. See Course 10, p. 48. Mr. KELLY.

9. Nineteenth Century Prose. See Course 9, p. 47. Professor REEVES.

B. Courses open to graduates only.

13. Anglo-Saxon. For detailed information see Course 13, p. 48. Professor REEVES.

14. Gothic and Old Saxon. See Course 14, p. 48. Professor REEVES.

HISTORY.

A. Courses open to both graduates and undergraduates.

7. The French Revolution and Napoleonic Era. Lectures. Fall and winter terms. Two hours a week. Professor WILCOX.

8. The Nineteenth Century History of Europe. Lectures. Spring term. Two hours a week. Professor WILCOX.

6. Constitutional History of the United States. Lectures. Three hours a week. Professor WILCOX.

9. Seminary in Early English History. Three terms. Two hours a week. Professor WILCOX.

10. Seminary in United States History. Three terms. Two hours a week. Professor WILCOX.

Special research work is also provided for those who intend to take the Master's degree in History as the major study. This work is conducted personally by the Professor of History and, in each case, is along the lines of the candidate's dissertation for the degree.

B. Courses open to graduates only.

11. Seminary in the French Revolution. Two hours a week. Professor WILCOX.

This consists, so far as possible, in a critical and comparative study of original sources. Controverted points receive special attention.

12. Seminary in the Period of Napoleon. Three terms. Two hours a week. Professor WILCOX.

POLITICAL SCIENCE.

A. For graduates and under graduates.

9. Economics, advanced course. A study in economic theory, historical and critical, as described under Course 9, on page 54. Throughout the year, Mon., and Th., at 2:30, Professor LOOS.

7. Economic Policy. The courses in public finance, currency and banking, transportation, diplomacy and foreign relations, described in the undergraduate statement, on pp. 53–54, as Courses 7, 3, 5 and 6, with such additional work as may be prescribed. Open only to those who have a fair knowledge of economic theory. Throughout the year. Professor LOOS.

1. Sociology. Part 1. Lectures during the fall term on the primary factors and forces of social phenomena; special attention is given to the earliest phases of political organization. Part 2. In the winter term, pauperism, crime, police and sanitation receive special attention; this will be followed in the spring term by a study of municipal government, with special attention to social problems. Throughout the year, Mon., Wed., Fri., at 10. Professor LOOS.

B. Courses open to graduates only.

4. Political Philosophy. A study in political theory, classical and modern, with some notice of state forms. Lectures with critical reading of Aristotle's Politics during the fall term; and Green on Political Obligations and Part I of Sidgwick's Elements of Politics during the winter and spring terms, Tu., Th., at 11. Professor LOOS.

5. Seminary in Political Science. It is the aim of the Seminary to encourage special investigations. Questions in economics, statistics, finance, political philosophy, administration or law may be taken for special research. From time to time papers are read, and then familiarly criticized and discussed. Professors LOOS and SHAMBAUGH.

Throughout the year alternate Mondays at 7:30.

GOVERNMENT AND ADMINISTRATION.

A. Courses open to graduates and undergraduates.

8 and 9. Political Theory and Comparative Constitutional Law. A study of the more general and theoretical aspects of political phenomena. Fall term: Political Theory. Winter term: Comparative Constitutional Law. Spring term: Papers on special topics in political theory and comparative constitutional law. See above, Politics III., page 56. Professor SHAMBAUGH.

6. American Political Theory. In this course the writings of Hamilton, Washington, Jefferson, Madison, Clay, Webster, Calhoun and Lincoln will be read and discussed. Fall and winter terms, two hours. Professor SHAMBAUGH.

11. Administrative Law. A comparative study of Administrative Law in France, Germany, England and the United States. One term, two hours. Professor SHAMBAUGH.

PHILOSOPHY.

A. Courses open to graduates and undergraduates.

4. History of Philosophy. A course in Greek, mediæval and modern philosophy. Lectures, with assigned readings in the texts of Zeller, Weber, Falckenberg and Erdmann. Professor PATRICK.

Throughout the year, Mon., Wed., Fri., at 11.

6. Laboratory Course in Experimental Psychology. A theoretical and practical course in psychological experiment. The exercises are so arranged as to familiarize the student with the methods and the apparatus of typical experiments in each of the approved lines of psychological research. The students perform the experiments and report and discuss the results and literature on each subject. Laboratory work and reports. Prerequisite, Course 3. Dr. SEASHORE.

7. Introduction to Philosophy. The purpose of tnis course is to supplement the course in the history of philosophy by a more critical study of philosophical problems and systems. Lectures, with readings from Paulsen's Introduction to Philosophy. Professor PATRICK.

8. Abnormal Psychology. Hypnosis, sleep, alterations of personality, automatism, hallucinations, and the psychology of the abnormal and defective classes, will be discussed. Lectures with required reading. Prerequisite, Course 3. Dr. SEASHORE.

B. Graduate Courses.

10. Special Research in Psychology. Original investigations of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *Studies in Psychology*. Dr. SEASHORE.

12. Seminary in Psychology. Reports and discussions upon a few selected problems in the psychology and philosophy of mind. Special emphasis will be laid upon the nature of consciousness and the theory of knowledge. Dr. SEASHORE.

13. Seminary in Philosophy. Papers and discussions upon special problems in philosophy. Theism was the subject taken up the past year. Professor PATRICK.

PEDAGOGY.

A. Courses open to both graduates or undergraduates.

2. Philosophy of Education and Practice of Teaching. Lectures and recitations. It is the purpose in this course to set forth the aims of education, as these aims have been developed in the history of education; also to treat somewhat fully the doctrines of the educational leaders of recent times, and finally to illustrate the application of these doctrines in teaching. Fall term: Educational Aims and Doctrines. This part of the course will include a special treatment of the Herbartian pedagogy and a discussion of educational values. Winter term: Teaching and governing. This part of the course will embrace a treatment of the formal steps of instruction, an exposition of methods of teaching and lectures on sanitation. Spring term: Secondary Education. In this part of the course, attention will be given to the organization of courses of study and methods of instruction in high schools. Professor MCCONNELL.

5. School Systems. This course will require of the students an examination of the state and the city systems of the United States. Lectures and reports. Professor MCCONNELL.

6. Child Study. In this course the history, literature and methods of work in child study will be treated. Professor MCCONNELL.

Graduate students in these courses, in addition to the work expected of undergraduate students will be required to make a special study of one or more of the subjects included in the course selected.

B. Courses open to graduate students only.

8. Public School Conditions. This course will consist of concrete studies of public school conditions, and will be statistical and descriptive. It will be taken as individual work and will be under the direction of Professor MCCONNELL.

9. Elementary Education in Germany. In this course the student will be required to make a special study of the application of the Herbartian principles in the elementary schools of Germany. The student must be able to read German. Professor MCCONNELL.

PHYSICS.

A. Courses open both to graduates and undergraduates.

6. Special Investigation or Research, to follow 4 and 5, page 65. Professor VEBLEN and Mr. BOWMAN.

7. Theory of Direct Current Dynamos and Motors. Professor VEBLEN.

8. Theory of Electricity. Direct currents twice a week. Professor VEBLEN. Alternate currents three times a week. Mr. BOWMAN.

9. Alternate Current Machinery. Polyphase current machines twice a week. Professor VEBLEN. The transformer, three times a week. Mr. BOWMAN.

13. Heat and Thermodynamics. Mr. BOWMAN.

15. Seminary. Systematic and critical reading of physical journals. Meetings every week through the year. Professor VEBLEN.

B. Courses open to graduates only.

The physical laboratory affords opportunity for such special work and research as may be desired for additional minor and major courses. Work may be laid out for those who wish, in any special line, and will include both experimental and theoretical treatment of the branches chosen. For those who prefer it a general major course in physics will be arranged by a suitable selection from the different courses offered.

CHEMISTRY.

A. Courses open to both graduates and undergraduates.

6. Theoretical and Physical Chemistry. This course consists of lectures and laboratory work, and comprises an experimental study of cryoscopic, ebullioscopic and vapor density methods for the determination of molecular weights, of the speed of chemical reaction, of the coefficients of chemical affinity, and of other problems of like character. Only in even numbered years. Professor ANDREWS.

5. Advanced Quantitative Analysis. Professor ANDREWS.

10. Crystallography. Lecture and laboratory course in Crystallography and Crystal Measurements. Mr. WALKER.

B. Courses open to graduates only.

11. **Research Work.** Organic Chemistry. Professor ANDREWS.

12. **Research Work.** Physical and Inorganic Chemistry. Professor ANDREWS and Mr. WALKER.

ANIMAL MORPHOLOGY AND PHYSIOLOGY.

A. Courses open both to graduates and undergraduates.

The following courses are offered to graduate students who elect work in morphology as a minor. The completion of undergraduate Course 1, or its equivalent, is prerequisite.

2. **Comparative Histology.** A general course of laboratory work on the histology of animal tissues and systems of organs. Professor HOUSER and Mr. BURGE.

3. **Comparative Neurology.** This is a specialized course for the detailed study of the nervous system. Lectures and laboratory work. Professor HOUSER and Mr. BURGE.

4. **Vertebrate Embryology.** A laboratory course, accompanied by a series of lectures, for the study of the frog's egg and the development of the chick. Professor HOUSER and Mr. BURGE.

B. Open to graduates only.

7. **Research Course.** Facilities for original investigation will be provided for those who elect work in this subject as a major. The specific character of such work will be determined by individual needs and preferences, but, in general, a biological problem will be assigned for independent investigation through the use of refined laboratory methods. Candidates for this work are supposed to have a biological training at least equivalent to that provided by undergraduate Courses 1, 2, 3, and 4. Professor HOUSER.

ZOOLOGY.

A. Courses open both to graduates and undergraduates.

7. **Lectures in Speculative Zoology.** Two hours a week. This course is devoted to a presentation of the more prominent theories concerning the origin and evolution of animal forms and a historical

review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts and intelligence of animals. The course will continue through the year. Professor NUTTING.

8. **Thesis.** Equivalent to two terms' work. Advanced work in any group of animals of which the museum contains a sufficient series. Free access to any specimens or books on the museum floor is accorded to students doing thesis work in zoology. Professor NUTTING.

B. Courses open to graduates only.

9. An exhaustive systematic discussion of any limited group of animals of which the museum affords sufficient material and the library sufficient literature.

In several groups such as birds, echinoderms, mollusca, crustacea, coleoptera and cœlenterata, the museum can now offer facilities for the most advanced systematic work, both the material and literature being adequate.

10. Special investigation along the line of speculative zoology, e. g., coloration of animals, geographical distribution, variation, natural selection, etc.

GEOLOGY.

A. Courses open both to graduates and undergraduates.

3. **Invertebrate Paleontology.** Course 3, described on page 72, is offered to graduate and undergraduate students who have previously taken Course 2. This course can only be taken as a minor by candidates for the Master's degree. Professor CALVIN.

4. **Economic Geology** of the United States may be taken on the same terms as 1.

B. Courses open to graduates only.

6. Graduate students who elect geology as a major will be assigned work involving original research in some branch of geology or paleontology. This work may embrace such subjects as describing and mapping the geological formation of some selected area, Pleistocene geology of some country or group of countries, the stratigraphic distribution of the fauna of a given geological formation, the critical

study of certain selected geological faunas, the geological and geographical range of certain zoological groups of organisms, or the evidence of evolution in successive geological fauna. Throughout the year, daily. Professor CALVIN.

BOTANY.

A. Courses open to both undergraduates and graduates.

Courses 5, 6, 7, 9 and 10, as described on pp. 74, 75, are open to graduates who may select botany as a minor. The completion of Courses 1, 3 and 4, as described on pp. 73, 74, or the equivalent is presupposed in all cases.

B. Courses open to graduates only.

12. **Histology.** The preparation and critical study of material illustrative of the structure of some special group of either sporophytes or spermaphytes; or the critical study of some special organ or tissue as developed in different plant groups. Professor MACBRIDE and Assistant Professor SHIMEK.

13. **Physiology.** Practical experimentation in laboratory and field, with the object of solving, so far as may be practicable, some physiological problem as presented in the case of a selected plant or group of plants; or the critical study of the function of some special organ, or group of tissues. Other topics may be found in research relative to the effect of environment, cross and self-fertilization, etc., in the matter of the distribution and differentiation of species, law of heredity, and kindred problems. Professor MACBRIDE and Assistant Professor SHIMEK.

14. **Systematic Botany.** Comparative study of the species of plants found in special geographic areas in connection with an investigation of the laws governing geographic distribution; studies of special natural orders of plants, cryptogamic or phenogamic, with reference to their taxonomy, relationships, distribution, etc.; comparative studies of plants of economic importance, their relationships and history; studies in problems of local forestry, especially as related to conditions found in the Mississippi Valley. Professor MACBRIDE and Assistant Professor SHIMEK.

MATHEMATICS.

The courses outlined below are offered to graduate students.

5. Integral Calculus. Hyperbolic functions, definite integrals, including the *beta* and *gamma* functions and elliptic integrals; the elements of differential equations. Lectures throughout the year; supplemented by a weekly Seminary. Professor WELD.

6. Differential Equations. Lectures throughout the year; supplemented by a weekly Seminary. Professor WELD.

7. Harmonic Functions. Lectures throughout the year; supplemented by a weekly Seminary. Professor WELD.

8. Determinants and Modern Geometry. This course is supplemented by a fortnightly Seminary. Mr. BAUER.

9. Analytical Mechanics. Statics; dynamics; the mechanics of fluids. This course is supplemented by a weekly Seminary. Assistant Professor SMITH.

10. Advanced Mechanics. Virtual velocities, the principle of least action; dynamics of a particle with reference to the theory of orbital motion; hydromechanics. Lectures throughout the year; supplemented by a weekly Seminary. Assistant Professor SMITH.

Further details regarding the above courses will be found on pages 77–78.

It is to be noted that in each of the courses a knowledge of the elements of the differential and integral calculus is implied. Graduate students in other lines of work may, however, take as a minor either of the two elementary courses in calculus offered to undergraduates. See Courses 3 and 4, pp. 76–77.

The courses in mathematics cannot, in general, be taken *in absentia*

The following schedule is recommended to those wishing two years of graduate work:

First year: Review elementary calculus; integral calculus; analytical mechanics; minor, subject to the approval of the Faculty. See pp. 76–78.

Second year: Differential equations or harmonic functions; determinants and modern geometry; advanced mechanics; minor, subject to the approval of the Faculty. See pp. 76-78.

Each candidate for a degree will be required to submit a thesis representing original investigation in either pure or applied mathematics.

ADVANCED DEGREES.

Master of Arts and Master of Science. The degree of Master of Arts, or Master of Science, will be conferred upon resident graduates on the following conditions:

1. The candidate must be a graduate of this University, or of an accredited University or College.

2. He must have pursued, during one or more years, a course of graduate study at this University, covering one major and one minor subject. In a two years' course, one major, and two minors, may be allowed. His studies during this time are to be under the immediate supervision and control of the professors immediately concerned, and to be subject to the approval of the Faculty.

3. In all cases, the minor, or minors, must be closely allied to the major subject.

4. He must submit a thesis of at least 5,000 words, showing marked attainment in some branch of learning. The subject of this thesis must be announced to the Faculty for approval, not later than the second Friday in December, and the thesis itself must be presented to the Examining Committee at a date to be set by the professor in charge of the thesis work, not later, in any case, than May 20th of the year in which the degree is expected.

5. He must, at the close of his course, pass a satisfactory examination, both oral and written, conducted by a committee which shall consist of three professors, selected by the Faculty for this purpose.

6. The degree of Master of Arts may be granted only after the completion of a course mainly literary in character; Master of Science, after one mainly scientific.

Non-resident graduates may receive the Master of Arts or Master of Science degree on complying with the following conditions in addition to or modifying those enumerated for residents:

1. The candidate will be required to outline a course of study, comprising a major and one allied minor subject, which must be approved by a committee of two or more professors named by the Faculty to pass upon it.

2. He shall at the close of each academic year present to the Faculty a report, which should constitute a complete synopsis of the

year's work, naming topics studied and authors read. These annual reports are expected to be specific and comprehensive.

3. His graduate studies must extend over three years; although in exceptional cases, where the candidate devotes a large part of his time to study, a shorter course, but in no case less than two years, may be accepted.

Civil Engineer. The degree of Civil Engineer is not conferred upon completion of an undergraduate course in engineering, but instead thereof, the degree of Bachelor of Science in Civil Engineering. The degree C. E. will be conferred on graduates who have practiced the profession at least three years, and who have submitted an approved thesis, and passed a satisfactory examination.

Doctor of Philosophy. The degree of Doctor of Philosophy will be granted under the following conditions:

I. Prerequisites.

1. The candidate must have received the Bachelor's degree either from this institution or from some other of equal rank.

2. He must present evidence of having completed a satisfactory amount of undergraduate work in the subjects proposed for investigation for this degree.

3. He must possess a knowledge of French and German at least sufficient for purposes of research.

II. Conditions of Candidacy.

1. At least three years of graduate study will ordinarily be required. Of these two must be in residence and the last year prior to receiving this degree must be spent at this University.

2. In making formal application for this degree the candidate shall select one major study and one or two minors; the minor study or studies shall be closely applied to the major and shall be such as with it to constitute but one single field of research.

3. The application of the candidate setting forth the line of research proposed shall be approved and endorsed by the professor or professors under whose direction it is proposed to prosecute the work.

III. Dissertation.

1. On completion of his work the candidate shall submit to the Faculty a formal dissertation which shall not only exhibit evidence of

original research but shall in itself be a contribution to the sum of human knowledge.

2. The dissertation must be in acceptable literary form; although for acceptance it will depend chiefly upon its subject matter.

3. The subject of the proposed dissertation must be submitted to the Faculty not later than the last Friday in September of the year preceding that in which the degree is expected; and a copy of the dissertation printed or type-written, must be in the hands of the secretary of the Faculty not later than the 20th day of May of the year in which the degree is expected. In case the dissertation offered is accepted by the Faculty and the candidate passes satisfactorily the examinations, provided for in the next section following, he shall prior to receiving his degree deposit with the librarian of the University twenty-five printed copies of the dissertation so accepted.

IV. Examinations.

1. At such time as may be agreed upon by the candidate and the professors in charge of his work he shall pass an examination in form both oral and written; the examination to be conducted by the professors immediately concerned, the written privately, the oral in presence of the Faculty. For purposes of this examination five members of the Collegiate Faculty shall constitute a quorum.

MATERIAL EQUIPMENT.

LABORATORIES.

Chemical Laboratory.

The chemical laboratory occupies two stories in the laboratory building. This space is divided into twenty-five rooms, designed in such a way as to afford facilities for the prosecution of a wide range of chemical work.

The general laboratory is a room 100 feet long by 27 feet in minimum breadth, lighted from one side only by ten large windows. In this and all other rooms of the building provision has been made for perfect ventilation by the construction of numerous air flues. The building is heated by steam, which will also be freely used for chemical purposes, as for drying-ovens, distillation, etc.

The lecture hall is built in amphitheater form with raised seats. It will accommodate nearly two hundred students, every one of whom can clearly see the lecture table and any experiment that may be performed there, even from the most distant part of the room.

The size of the building on the ground is 150 x 105 feet. In all the rooms, cross lights have been avoided, and in every respect, the designer and the architect have spared no pains to meet every reasonable demand in the construction of a thoroughly modern and substantial structure adapted as perfectly as means would admit to its special uses.

A storage battery and dynamo in connection with a gas engine furnish the electricity to the various laboratories for electrolysis and other uses. Especial facilities in the way of apparatus are provided for the study of physical chemistry.

Physical Laboratory.

The physical laboratory occupies the first floor and the basement of the North Building, with an available floor space of more than 8,000 square feet.

In the basement is the large engine and dynamo room containing a gas engine which drives a shaft twenty feet long. To this shaft are belted the dynamos, of which there are six of from one to ten horse-power capacity, and representing several types. Here also is a cable switch-board, meters, lamps, and other apparatus. In this room, and driven by the same engine, are three lathes, a planer, drill-press, forge and the usual tools for working metal. In the battery room are some 45 accumulators of different varieties. A large and commodious photometer room is supplied with a complete Kruess photometer. One basement room has been equipped as an electrical laboratory. Another room is supplied with a cabinet-maker's bench and a few wood-working tools.

On the floor above are eight rooms. The lecture room, with seats for some 70 students, is supplied with water and gas and with wires from the dynamos and the accumulators. The windows can be easily darkened, and there are conveniences for making projections by sun-light or by electric or other artificial light. A large and well lighted room is devoted to the uses of a general laboratory, especially in the line of mechanics, and contains a number of balances, air-pumps, a cathetometer, and a number of other measuring instruments. Another large room contains much of the apparatus for electrical testing. Here also is the special physical library with the journals taken by the laboratory. Three smaller rooms are given respectively to heat, light, and magnetism, and are well equipped with apparatus. There are also two offices, for the professor in charge and the assistant professor.

The laboratory is fairly well supplied with lecture apparatus; and among the instruments of precision are many of the best and finest to be had. The equipment is especially full in mechanics, optics and electricity. Most of the apparatus has been purchased in recent years, a nd has been selected with great care; and some has been constructed for particular uses in this laboratory.

Laboratories for Animal Morphology and Physiology.

The laboratories for animal morphology and physiology occupy the west half of the first floor of the Natural Science building together with a portion of the basement. They are supplied with water and gas throughout, and are lighted by twenty windows.

The laboratory for the course in general morphology receives light from the north. It is furnished with heavy oak, slate-topped tables, particularly adapted to the anatomical and microscopical requirements of the work. The tables will accomodate thirty students at one time. The equipment of this laboratory includes thirty compound microscopes, the requisite accessory optical apparatus, a series of over seven thousand microscopical slides, a large number of anatomical preparations, charts and models, and the numerous pieces of minor apparatus, glassware, etc., incident to general biological work.

The laboratory for the several advanced courses is lighted from the west and south. It is furnished with tables and reagent racks designed to meet the special requirements of the work pursued here. A smaller room opening from the main one supplies the conditions desired for apparatus of constant temperature. The equipment of this laboratory embraces special microscopes, sliding microtomes of approved pattern, a Minot automatic microtome for serial sectioning, a large Lillie water bath for paraffin imbedding, a laboratory incubator for work in embryology, a thermostat of ample size, a complete stock of biological reagents, sets of reagent bottles for each student, a large assortment of glassware, and various pieces of physiological apparatus.

Opening from the main laboratories are smaller rooms available for those pursuing special lines of investigation. The basement laboratory is utilized for aquaria, anatomical tanks, animal cages and appliances for various kinds of work.

Laboratories for Geology and Paleontology.

The material for illustrating the work in geology and paleontology embraces:

1. The museum collection of rocks, clays, building stones, minerals and fossils.

2. A large series of maps, charts, lantern slides, photographs and geological models.

3. A lithological lathe for making rock sections, or sections to illustrate the structure of ancient forms of animals and plants.

4. Petrographical microscopes.

5. Photographic apparatus, including a large photomicrographic camera.

6. A large series of negatives from which the students make prints to illustrate their permanent note books.

7. Geological phenomena illustrated within easy reach of Iowa City.

The surrounding neighborhood affords many instructive examples of phenomena of interest to the student of geology. At the same time it offers unexcelled opportunities for field work in mapping, making geological sections, tracing strata from one exposure to another and making paleontological collections. The Pleistocene deposits are of especial interest. The available material is not only sufficient to illustrate the ordinary undergraduate courses in geology, but advanced students will find enough to occupy their time with profit for two or more years.

Botanical Laboratory.

This laboratory is located on the second floor of the Natural Science Building, and is in direct communication with the Herbarium. It is supplied with heavy oak, slate-topped tables, furnished with drawers and cases for the instruments used in microscopic work, and is arranged to accommodate twenty-five students at one time.

Twenty-five compound microscopes, with necessary accessories, section-cutters, etc., are at the disposal of the students.

Connected with the main laboratory are private laboratories for students pursuing special lines of investigation. Two of these are furnished with special microscopes and apparatus for investigation in vegetable physiology.

These laboratories are well lighted, and in every way adapted to satisfactory work.

Psychological Laboratory.

The psychological laboratory occupies the lower floor of the brick building, No. 14 North Clinton street, facing the campus. It includes a commodious lecture room, library and reading room, in addition to three quiet, well-lighted rooms for laboratory work, and a dark room.

The thorough equipment of the laboratory with apparatus and needed accessories offers every opportunity for the study of the different senses, memory, illusions, time relations of mental phenomena, and the nervous system.

A partial list of apparatus is as follows: A complete set of instruments for studying the time relations of mental phenomena by the graphic method, recording time to the thousandth part of a second; this set, excluding the smaller necessary accessories, comprises the following pieces: a recording drum, two induction coils, batteries, storage battery, multiple key, reaction keys, five finger reaction key, graphic chronometer with electro-magnetic attachment, rheocord, 100 v. d. electro-magnetic tuning-fork, double contact electro-magnetic tuning-fork, time markers, automatic contact, galvanometer, condenser, touch key, switches, commutator, telephone-receivers, Geisaler stimulator for sight reaction, pendulum circuit interrupter, instantaneous exposure apparatus, slide inductorium, foil apparatus and speed counter. For the study of taste and smell: several varieties of olfactometers and gustatory apparatus. For touch, muscle sense, temperature and kindred phenomena: three sets of muscle sense weights, loaded boxes for the study of the psycho-physic law and weight illusions, two sets illusion blocks, steadiness gauge, æthesiometers, hot and cold spot apparatus, balance scale, five dynamometers, ergograph, algometer, Marey tambours, thought-action apparatus, foil, muscle-memory apparatus, voluntary motor recorder, spirometer and set of touch weights. For hearing: siren, sound pendulum (by Krille), series of 22 Koenig cylinders for highest audible tone, Galton whistle with manometer and blower, Appunn's reed, set of tuning-forks with resonance boxes for illustrating harmony, beats and sympathetic vibration, two sets of forks for discriminations of pitch, metronome, two audiometers, two pitch pipes, sonometer, stroboscope for study of pitch differences. For sight: rotation apparatus with Maxwell color disks

for illustrating mixing of colors, color contrast, etc., contrast apparatus, two tachistoscopes, apparatus for testing color blindness, Rothe's color-wheel with disks, Bradley's pseudoptics, two photometers, binocular and monocular apparatus, eye-muscle apparatus, dark box, apparatus for outlining the blind spot, zoetrope and perimeter. The latest model of the Zimmerman kymograph and Zeitsinn apparatus gives facilities in dealing with all problems requiring the graphic method and investigation of the time sense.

In addition to the apparatus enumerated above might be mentioned other numerous pieces for demonstration purposes. The study of the nervous system is illustrated by about one hundred charts in addition to various models, including Auzoux's dissectible model of the brain, ear models, eye models, ophthalmotrope, nerve-muscle machine, etc.

The workshop, fitted out with lathe, work bench and necessary tools, mimeograph, dissecting apparatus, etc., forms an indispensable adjunct to the laboratory.

Astronomical Observatory.

The students' astronomical observatory is conveniently located on the University campus. It is furnished with a five-inch equatorial telescope by Grupp of Dublin, having circles, driving clock, position micrometer, helioscope and a solar and stellar spectroscope, a transit instrument by William Wuerdeman of Washington, a prismatic sextant and artificial horizon by Pistor and Martins of Berlin, clock chronometer, chronograph, etc.

The mathematical and astronomical library comprises over one thousand volumes, including many rare and valuable works. The periodical literature devoted to these branches of science is also well represented.

Civil Engineering Laboratories and Draughting Rooms.

The hydraulic laboratory is a room having a floor space of 575 square feet. The equipment for 1898-99 will include the necessary tanks with standard orifices, tubes and weirs for free and submerged flow, hook gauge, water meters of various kinds, pressure gauges and other necessary appliances for illustrating hydraulic principles; also a Price's pneumatic current meter for field gaugings.

The cement laboratory contains a Riehle 1,000 pound cement tester, a Fairbanks automatic shot-stop cement tester of same capacity, briquette making machine of the Sims and S. U. I. type and all necessary tanks, mixing sinks, molds, etc., for making complete tests of cement.

The iron, steel, and wood laboratory contains an autographic testing machine and a 100,000 pound Riehle machine.

The draughting rooms are well lighted and equipped with all necessary appliances.

The department is provided with a field equipment ample to permit full and complete practice in the different kinds of surveying; this equipment consists of a vernier compass, a railroad compass, a solar compass, levels and transits with stadia, gradienter and Saegmullar solar attachment, also a plane table of the latest approved form with best telescopic alidade and all necessary attachments, together with all the rods, flags, chains, tapes, etc., that are necessary to equip fully the various classes and divisions in surveying without interfering with each other in their work.

The engineering library consists of over 500 volumes of the standard works on the various engineering subjects; these books are selected from and are a part of the general library, but are arranged in a convenient room adjacent to the drawing rooms, and are freely used by the engineering student. All the best engineering journals and periodicals are received, bound and kept on file.

Each engineering student is eligible for membership in the Engineering Society. This society meets each week, and papers upon engineering subjects are prepared and read by the students.

An engineering journal, *The Transit*, is published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering problems by undergraduate students and alumni.

MUSEUM.

Museum of Natural History.

The museum of natural history is rapidly growing, and becomes daily more valuable through donations of material by friends of the University.

By the generosity of the collector, the famous Hornaday collection of mammals and birds has become the property of the University. This collection contains many rare forms of mammals and birds, and is particularly rich in typical exotic forms from India and Australia.

Mr. D. H. Talbot of Sioux City has donated to the University his extensive collection of natural history specimens and minerals. This collection contains many thousand specimens, being especially rich in mammals, birds and anatomical preparations.

During the last seven years, expeditions for zoological explorations in the interest of the University have visited the following regions: Bahama Islands, Bay of Fundy, Rocky Mountain region, Pacific coast, Alaska, mountains of Tennessee, the Winnipeg country, Lake Athabasca, Great Slave Lake, the Arctic coast, Siberia, Cuba, Florida Keys, British West Indies and the Bay of Naples.

An entire rearrangement of the museum has been undertaken, and a new system of labeling, cataloguing, and exhibiting has been adopted, with the intention of making the material embraced of the utmost practical use to students of natural history.

A rapidly growing library of reference for the use of students of zoology is placed on the museum floor, and a free use of all the material in the various collections is encouraged, for which purpose a cheerful and convenient study room has been provided for the use of students and specialists.

The material includes:

1. Geological Collections.

1. A large series of minerals, building stones, fossils, earths, etc., collected chiefly in the prosecution of the State geological surveys, between the years 1856 and 1870. These collections are annually increasing by contributions from various sources.

2. The Calvin collection of American and European fossils.

3. A superb collection of cretaceous cycads from the Dakota sandstone of the Black Hills.

4. Recent extensive collections illustrating the cretaceous faunas and economic geology of the Black Hills.

A rapidly growing collection illustrating general economic geology.

2. Zoological Collections.

1. Mammals. A large series of mounted specimens is now on exhibition, the great majority being rare and valuable foreign species, including a series of marsupials, which surpasses anything of the kind west of the Alleghanies.

Besides the Hornaday collection, the museum contains a large number of native mammals, about forty specimens being from the Pacific coast. A complete series of the larger mammals of North America is rapidly being secured through the kindness of Mr. D. H. Talbot, and the efforts of Mr. Frank Russell, who returned from the far North with an exceptionally fine series of the large mammals of that region.

2. Birds. The ornithological material in the museum now embraces about 11,000 specimens, about 1,000 of which are exhibited in the mounted series, the remainder being included in the study series for the use of students and specialists.

Besides the large collection of native birds, containing nearly all the species found in Iowa, the following collections are noteworthy:

The Hornaday collection of birds, containing one hundred and twenty-five specimens, nearly all of which are exotics, and many, such as the ostrich and emu of great value.

The Bond collection of birds of Wyoming, donated together with a large collection of Iowa birds, by Mr. Frank Bond of Cheyenne, Wyoming.

The Harrison collection of British game birds and birds of prey, a large and valuable series, donated by John Harrison, Esq. of England.

The Talbot collection of American birds, embracing thousands of specimens, mostly from the Mississippi Valley.

A collection of 500 birds from the N. W. Provinces of British America, made by the Curator, Mr. Frank Russell and Mr. A. G. Smith.

A collection of about 600 specimens of birds from the Winnipeg

country, Great Slave Lake, Athabasca Lake, the Mackenzie River and the Arctic coast, made by Mr. Frank Russell.

The Curator has donated his study series of over 800 bird skins from North and Central America and the Bahama Islands. This series is of special value to students interested in ornithology.

3. Reptiles. The alcoholic collection of reptiles has received many important additions, among which may be mentioned a number of specimens from India, donated by Rev. A. Loughridge, and many native specimens presented by students. Ex-Regent B. F. Osborn has donated his large collection of alcoholic specimens, especially reptiles, thus nearly doubling the series of these forms.

4. Fishes. Assistant Professor B. Shimek has presented the museum with his entire collection of fresh-water fishes, of which we now have several hundred specimens, besides a number of marine forms.

A collection of 135 species of the fresh-water fishes of Central and Western North America, has been donated to the University by the United States Fish Commission.

5. Insects. Assistant Professor Wickham is now engaged in assorting a large series of the coleoptera of North America, which he has generously donated. All of the foreign coleoptera in this magnificent collection are now the property of the museum.

6. Marine Invertebrates. A collection consisting of several thousand specimens of crustaceans, mollusks, star fishes, corals, sponges, etc., has been supplemented by a valuable series consisting of several hundred alcoholic specimens, many of which are the gift of the United States Fish Commission.

The alcoholic collection has been enlarged by material collected during two expeditions to the Bahamas, Cuba and the Florida Keys, and thousands of specimens have been added by collections made in the Bay of Fundy by Professors Calvin and Nutting.

A car load of marine specimens was secured by the Bahama expedition in 1893. This collection contains a large number of deep-water forms, placing this University far ahead of all other western institutions in the matter of marine materials for exhibition and study.

A valuable series of marine forms of the more fragile and delicate kinds, such as medusæ, sea-anemones, etc., has been secured from the

Stazione Zoologica at Naples, where the most superb preparations of these wonderfully beautiful forms are made.

7. Terrestial and Fresh Water Mollusca. The Shimek collection of land and fresh-water shells, embracing nearly all the species known to occur in Iowa, together with many exotic species.

8. Osteological Preparations. A series of mounted skulls and skeletons, illustrating the osteology of typical series of vertebrates, is exhibited, and is of the greatest value to students of comparative anatomy and zoology.

9. Ethnological Material, illustrating the handiwork of the Mound Builders, Pueblo Indians, Zunis, Moquis, Acomas, Mojaves, Crees, Dog Ribs, Metis, Kosmolliks, Piegans, Tchukchees and Navajos, together with skulls and other remains of the ancient and modern inhabitants of America.

Mr. D. H. Talbot of Sioux City has added very largely to this department of the museum. Mr. Russell has been active in securing ethnological specimens illustrating the life and manufactures of the Crees, other northern tribes of Indians and of the Esquimaux.

3. Botanical Collections.

The herbarium is crowded into a single room on the second floor of the Natural Science Building. It contains:

1. A very large and constantly increasing collection of fungi, chiefly saprophytic, from all parts of North and Central America. To be classed here is also a large collection of the myxomycetes from all parts of the world.

2. A large collection of ferns and mosses from both hemispheres.

3. A collection of lichens, representing most of the species east of the Rocky Mountains.

4. A collection of many thousand flowering plants, representing very fully the local flora, and especially rich in Central American and European forms. The number of plants in the herbarium exceeds 200,000.

5. A collection of seeds and dry fruits including cones, representing the flora of North America chiefly, but containing also much material from the Tropics.

6. A collection of the principal woods of the United States.

The herbarium collections, thanks to friends and collectors in various parts of the world, are rapidly increasing in extent and value. It is hoped that private collectors will hereafter as heretofore find the University a proper place for the deposit and care of collections of plants.

Botanical Expeditions. Mr. Charles L. Smith was in Nicaragua from August 1894 to May 1896, as botanist for the University. He made handsome collections, reports of which will appear in succeeding numbers of the *Bulletin of the Laboratories of Natural History*. In 1897 botanical expeditions were sent to various sections of the United States. The principal one of these was in charge of Mr. T. E. Savage and was employed in Southeastern Missouri.

Special thanks in this connection are also due to E. D. W. Holway, A. P. Morgan, C. L. Smith, George Payne, Euclid Sanders, James E. Gow, T. J. Fitzpatrick, F. Reppert, J. H. Mills, L. F. Pammel, J. B. Ellis, H. F. Wickham, Paul Bartsch, B. Fink, R. I. Cratty, J. E. Cameron, C. C. Stover, L. M. Cavanagh, G. B. Rigg, T. E. Savage, P. C. Myers, C. W. Irish, C. W. Sears, E. Bethel, Katharine Vale, Professor Van Steenderen, Columbian Museum, H. L. Jones, S. Calvin, Minnie L. Howe, Wilfred Stull.

GENERAL INFORMATION.

The Library.

Notwithstanding the loss of some 25,000 volumes by fire June 19, 1897, the University has been able to supply the immediate wants of students in the past year by making fresh purchases, and the facilities for library work are now good. A large number of new books and new editions will be added in the ensuing year to the present collection, which now numbers about 16,700 volumes. The 27th General Assembly has passed an act levying a special tax for the rehabilitation of the library. This tax will make about $55,000 available for this purpose.

Nearly 130 periodicals, foreign and domestic, are regularly taken. These are kept in the general reading-room and are accessible to all students during library hours.

The main room of the library is large and well lighted and is open to students of all departments of the University from 8 A. M. to 12 M. and from 1:30 to 5 P. M.

Societies.

Several literary and scientific societies are maintained by the Faculty and the students of the University. They afford an important means of general culture and scientific research, and thus form a valuable element as well as an attractive feature in University life.

The BACONIAN has for its object discussion of scientific questions, and the POLITICAL SCIENCE CLUB discusses questions in history, politics, economics, law, education and ethics. The WHITNEY SOCIETY is devoted to the field of language and literature and the methods of instruction in these subjects.

The PHI BETA KAPPA SOCIETY elects to membership on the basis of high scholarship a certain number from the graduating class who have completed the Classical or Philosophical Course.

Among the purely literary societies are the TABARD, POLYGON and IVY LANE. The IRVING INSTITUTE, the ZETAGATHIAN SOCIETY, the PHILOMATHIAN SOCIETY for young men, and the HESPERIAN SOCIETY and the ERODELPHIAN SOCIETY for young women, hold weekly meetings for improvement in debate, oratory, writing and declamation.

There are also in the institution societies connected with the Engineering, Chemical, Law and Medical departments.

There is connected with the Irving and Zetagathian Societies a Lecture Bureau, which furnishes at a small cost during the year a series of literary and musical entertainments of a high order. From time to time, also, entertainments, musical, literary and dramatic are given by the University Glee Club, the Band, and other student organizations.

University Publications.

Natural History Bulletin. The laboratories of natural history inaugurated in 1888 the publication of bulletins for the purpose of preserving a record of the work prosecuted along the lines of botany, geology and zoology. Three volumes have thus far appeared in

twelve numbers, and two numbers of the fourth volume have been published. Material for three numbers more is at hand and these may be expected during the next eighteen months. The numbers are sent *gratis* to all correspondents from whom the University receives an equivalent, either in publications or material. To others the price is 50 cents a number. Address the Secretary of the University.

The Transit. An engineering journal, *The Transit*, is published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering problems by undergraduate students and alumni.

Studies in Psychology. This is an annual publication devoted to experimental psychology, begun in 1897. It contains the results of original research by the students and instructors in the psychological laboratory.

Documentary Material Relating to the History of Iowa. These publications contain documentary material illustrative of the history and politics of the commonwealth of Iowa. The series is edited by the professor of government and administration.

Student Publications.

The Vidette-Reporter. A tri-weekly newspaper.

The Quill. A weekly literary publication.

The Hawkeye. A University annual published by the Junior class.

University Extension.

The University recognizes in the University Extension movement an agency of great value in education. It invites correspondence from communities which may desire to organize lecture courses on literary and scientific subjects, and will to the extent of its ability meet the desires of these communities.

Lecture courses covering a wide range of subjects are offered by members of the University Faculties.

An arrangment has been made between the University and the University Association of Chicago by which University professors, so far as their regular duties will allow, will lecture before the centers working under the care of the Association.

Printed matter explaining the work offered by the University, including syllabi of lecture courses, is published by the University, and can be secured by addressing the Director of University Extension.

Prizes.

PECK PRIZES.—Mr. F. W. Peck of Chicago has established for the Northern Oratorical League prizes of $100 and $50 to be given to the first and second honor men in the annual contests.

PICKARD PRIZE.—A prize of $20 was offered last year by Dr. J. L. Pickard for the encouragement of extempore speaking to the student in political science who was awarded first rank in competitive extempore debate. A prize of the same value is again offered for this year. The competitive debate will take place early in June.

SAWYER PRIZE. A special gold medal, or a purse of $25, known as The Sawyer Prize, is offered for 1899 for the best essay of three thousand words written by any student of the University on a subject approved by the professor of English.

ROBERT TILLINGHAST FRENCH PRIZE.—A gold medal, in memory of the late Captain Robert French of Davenport, is offered for the best short story written by any student of the University. If work of sufficient merit is offered in competition, the medal will be awarded in 1898. If no such work is offered in that year, the medal will be awarded the first year sufficiently good work appears.

LOWDEN PRIZES.—Frank O. Lowden, Esq. of the class of 1885 offers two prizes of the value of $25 each for excellence in classical scholarship,—one for work in Latin and the other for work in Greek. The conditions of the competition will be announced at the opening of the collegiate year 1898-99.

MAYER PRIZE.—Mr. Max Mayer of Iowa City has established a prize of the annual value of $25 for excellence in athletics. The details as to the special matters of competition and the methods of awarding the prizes will be publicly announced at the beginning of the year 1898-99. This prize is open to students of all departments of the University.

Students and Civil Authorities.

The relations of students to all laws and to city ordinances is precisely the same as that of other residents of the city. The University grounds are as completely under the jurisdiction of the civil authorities as any other part of the city.

Means of Moral and Religious Culture.

Close Hall has been erected through the exertions of the Young Men's and Young Women's Christian Associations; mainly from funds contributed by the Faculty, students and alumni of the University and the citizens of Iowa City. It is a spacious and convenient building, containing a large assembly hall, gymnasium, reading rooms, reception room and bath rooms. It is extensively used for the meetings of the large and vigorous Christian Associations, as well as for the social and literary gathering of the students.

The churches of the city take a deep interest in the students of the University and heartily welcome them to their public services and to a share in their religious activities and social life. The churches of the city are the Baptist, Christian, Congregational, German and English Lutheran, Methodist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, Unitarian and Church of God.

Physical Training and Athletics.

The University authorities encourage physical training as acquired in a gymnasium, in military drill and in the exercises and sports in the Athletic Park, but only in such amount and of such character as is compatible with, and promotive of the higher objects of the University. Intercollegiate contests are allowed, but under conditions as to membership and organization of teams, and leaves of absence determined by the athletic committee of the Faculty.

Athletic Park. This field contains about ten acres in the immediate vicinity of the University grounds on which have been constructed a track for running and bicycling, tennis courts, baseball and football fields and a grand stand.

Gymnasium. In connection with Close Hall is an excellent gymnasium, equipped with suitable apparatus, lockers, baths, etc. This is under the direction of a competent instructor, who organizes classes for both young men and young women.

New Collegiate Building.

The 26th General Assembly passed an act levying a special tax for a period of five years of one-tenth mill on the total assessment of the State, the proceeds to be devoted exclusively to the erection of buildings for the University. This tax will yield $275,000 and it is the intention of the Board of Regents to begin during the current year the construction of a large and well equipped building for the use of the Collegiate Department.

Expenses.

There are no dormitories and no commons connected with the University.

Boarding and lodging in private houses can be obtained for from $3 to $5 a week.

Clubs are also formed, in which the cost of living is from $1.50 to $2.50 a week.

Room rent varies from 50 cents to $1.50 for each student a week.

The expense for tuition is as follows:

Collegiate Department, $25 per annum, payable, $10 at the beginning of the first term, $10 at the beginning of the second term, and the balance at the beginning of the third term. For one or two terms the fee will be $10 each.

It has been determined, however, by the Board of Regents, that no student need be excluded from the University by reason of his inability to pay tuition. Application for reduction of tuition, or for exemption therefrom, may be made to the President, and will be considered by the Executive Committee, or by the Board of Regents.

Each candidate for graduation will be required to pay a fee of $5.

A fee of $10 is required of all candidates for the Master's degree, for the degree of Civil Engineer, or the degree of Doctor of Philosophy.

Ample facilities are afforded in the city for instruction in Book-keeping, Stenography and Type-writing, in studies preparatory to the University and in Music, by the High School, the Iowa City Commercial College, the Academy, the Iowa City Conservatory of Music, and by private instructors.

Summer Session.

Beginning with the summer of 1899 the University will hold a Summer Session in the interest of teachers in the public and preparatory schools as well as of undergraduates who wish to carry on regular work during that period. Special announcements will be made in due time.

Law Department.

Faculty and Lecturers.

CHARLES ASHMEAD SCHAEFFER, A. M., PH. D., LL. D.,
President and Lecturer on Medical Jurisprudence.

EMLIN MCCLAIN, A. M., LL. D.,
Chancellor and Resident Professor of Law.

SAMUEL HAYES, M. S., LL. B.,
Resident Professor of Law.

JAMES A. ROHBACH, A. M., LL. B.,
Secretary and Resident Professor of Law.

JOHN J. NEY, LL. B.,
Resident Professor of Law.

EDWARD P. SEEDS, LL. B.,
Resident Professor of Law.

L. G. KINNE, LL. D.,
Lecturer on Law.

GIFFORD S. ROBINSON, LL. D.,
Lecturer on Law.

MARTIN J. WADE, LL. B.,
Lecturer on Law.

HORACE E. DEEMER, LL. B.,
Lecturer on Law.

LEONARD C. RINARD, LL. B.
Librarian.

LAW DEPARTMENT.

Preparatory Study; Length of Course.

The profession of law is properly regarded as a learned profession, requiring a considerable degree of general education as a preparation for its proper study and practice. Those who can take a college course, either in whole or in part, before entering upon the prescribed period of law study should do so, and it is recommended that in preparatory study special attention be given to American and English history, political science and international law. But whether one who desires to enter upon the study of law shall have collegiate preparation may perhaps be left to his own judgment, with the suggestion that such preparation is important to ultimate professional success. But in order that the student may successfully prosecute his studies in the law school he should have at least a high school education or its equivalent, and this will be insisted upon as a condition for admission to this Department.

The Statutes of Iowa regulating admission to the bar require two years' study of law, and the same term of study is required for graduation from the Law Department. The course of study is arranged on this basis, extending through two school years of thirty-six weeks each, exclusive of vacations, and the students are classified accordingly as Juniors and Seniors. The State Bar Association has recommended to the Legislature the extension of the required term of study for admission to the Bar to three years and whenever such extension is made the Law Department will, without doubt, extend its course of study to three years, and in this respect as in others strive to keep abreast of the best law schools of the country, but so long as a two years' term of study is sufficient to secure admission to the bar it is not deemed expedient to require a longer term for graduation from the Department.

Methods of Instruction.

The aim of any course of instruction in law may properly be considered as twofold: First, to impart a knowledge of the recognized principles of the law, and, secondly, to discipline the mind in methods of legal study. Various methods of instruction, each having its special merits, are pursued in different schools. They may be roughly arranged in three classes, namely, lectures, text-book instruction and study of cases. The peculiar merit of the first is that it may be made the means of giving the most vivid and striking picture of legal principles; the second furnishes the most convenient means of individual study, and the third the best discipline in legal thinking. In this school the effort is made so to present the subjects as to combine in the highest practicable degree the excellences of these various methods.

In connection with several of the lecture courses, the students are furnished with printed synopses, which give in a concise form, and more accurately than a student would usually write them in his note-book, the principal doctrines of the subject, arranged according to some analytical method. On some of the most extensive and important subjects, the students are required to provide themselves with and use text-books in which lessons are to be regularly prepared and recited, the recitations either following, or being accompanied with, oral explanations more or less formal, calling attention to the important doctrines, and explaining those which may be obscure. The study of leading cases is carried on extensively in connection with the courses of lectures, references for that purpose being given by the lecturer, or printed in the synopsis, and the student is frequently required to state briefly in the class the points decided in cases assigned for that purpose. In some subjects the students are required to provide themselves with volumes of selected cases, and the exercise in the class consists of a discussion of such cases by members of the class, and deduction therefrom of the rules of law on the topic to which the cases relate. This exercise in developing the rules of law from actual cases selected for the purpose, and studied by each student before their discussion in the class, familiarizes the student with the methods of investigation pursued by the lawyer and the judge,

and gives not only a knowledge of the law on the subject, but a discipline in research and in legal thinking not to be attained, it is believed, in any other way. As a preparation for this method of study, the course in the study of cases is especially valuable.

The fact that the greater part of the instruction is by resident professors, giving their entire time to the school, makes it possible to pursue each subject consecutively, one hour a day, until it is concluded. The attention of each student being thus directed to but few topics at once, he is able to obtain a clearer and more complete conception of each than would be possible if the instruction were irregular and disconnected.

As an aid and stimulus in study, and also for the purpose of furnishing satisfactory evidence of progress, written examinations are required from time to time on the various topics of the course, and until a reasonable proficiency in each topic has thus been shown, the candidate for graduation will not be presented to the committee for final examination.

Schedule of Studies.

The course of study is so arranged that the Junior and Senior classes have separate and distinct courses of instruction throughout, and the subjects are divided between the two courses and arranged in each course so as to be presented in natural order.

In the Junior year are placed subjects which are elementary and at the same time fundamental. The work of this year is therefore of more importance to the student than that of the Senior year, and requires careful study, at the same time imparting thorough dicipline and familiarity with the methods of legal reasoning. It is believed that the Junior studies are such as to make of the greatest value to the student the services of regular and experienced instructors and the advantages of a law school. Unless the principles of law as a system, the nature of its important divisions, and the fundamental doctrines of such subjects as Elementary Law, Contract, Torts, Criminal Law, Pleading, and Evidence, are thoroughly mastered, the whole legal education will be defective and unsatisfactory.

The courses of study are so arranged that the students in each year

shall have instruction in studies peculiar to that year for at least two hours a day, that time being divided between two instructors on separate subjects, which are thus carried along together. In each class a third hour of class work will be required during a part of the year.

The following schedule of study has several features to some extent peculiar. At the beginning of the Junior year a course of lectures, occupying one hour a day, is given on Elementary Law, in which course the attention of the student is called to the nature of law, its sources and development, the difference between the unwritten and the written law, the method of determining what the law is by use of reports, statutes, treatises, digests, etc., and finally to the different branches into which the whole body of the law is usually divided, and their relations to each other. This course covers remedial as well as substantive law, and thus furnishes instruction in the general principles of pleading, serving in this respect as a basis for the study of Code Pleading.

To the various branches of pleading and practice, special attention is given. Although it has been generally considered that the logic of pleading is to be found in the common law system, while the code system is looked upon as unscientific, yet a comparative study of the two will show that the latter is broader in its principles and more liberal in its application than the former. The principal branches of practice are fully treated during the Junior year in order that the student may apply them in the moot courts; but an advanced course in pleading with special reference to principles of common law pleading is given in the Senior year.

The school attempts to teach how to ascertain the authoritative value of cases. There is one course in which this is the only purpose. In this course the facts, pleadings, and result of each case are briefly stated by the student. Attention is then directed to the manner in which the case reached the court whose opinion is reported. The student is required to discover exactly what proposition of law was essential to the decision and to eliminate *dicta*. To this end he is finally required to prepare a brief but accurate note of the doctrine for which the case is authority. This work is intended to fit students for preparing briefs, text-books, and digests. Obviously this method is identical with that adopted by all careful lawyers in collecting author-

ities. The student who has mastered the system is prepared to make good use of other case courses in which the ultimate purpose is the mastery of the subject to which the cases pertain, and, indeed, is prepared to use intelligently all cases to which he may be referred in any part of his study or future practice.

The general instruction in the Law Department does not give prominence to the statutes and decisions of any one state, but is intended to fit students to practice in any state or country where the Anglo-American system of law prevails. For the benefit of the student who has determined where he will practice, and who wishes to familiarize himself in advance with the statutes and decisions of his chosen state, the Law Department furnishes optional courses of study supplementing the prescribed courses. An optional course will be given on the law of any state or territory, in which three or more students ask instruction. Each course will cover the constitution, statutes, and decisions, will call special attention to the points in which the law of the state in question differs from the law usually found throughout the United States, and will also require the student to become well acquainted with leading cases. A student intending to pursue a course in state law must provide himself with the revised statutes of the state in question, and a digest of its decisions.

The following schedule presents the course substantially as it was given during the year 1897-98 and the order in which the subjects may be expected during the year 1898-99.

JUNIOR YEAR.

FALL TERM.

Elementary Law. A course of lectures presenting the elementary principles of law in general, and of its important branches. This course covers also the principles of pleading. Eight and one-half weeks. Professor ROHBACH.

Contracts. Bishop on Contracts is the text-book used. Ten weeks. Professor NEY.

Code Pleading. A course of instruction, mainly by lecture, on

pleading under the codes, with practical exercises. Five weeks. Professor HAYES.

Study of Cases. Recitations in Wambaugh's Cases for Analysis. Three and one-half weeks. Chancellor MCCLAIN.

WINTER TERM.

Sales, Bailments and Pledges. A course of instruction by the use of Burdick's Cases on Sales and printed synopsis of bailments and pledges. Nine weeks. Chancellor MCCLAIN.

Torts. Recitations in Cooley on Torts, with oral explanations, and citation and examination of leading cases. Eleven weeks. Professor HAYES.

Agency. A course of lectures. One week. Judge ROBINSON.

Domestic Relations. A course of lectures on the subject of marriage and divorce, the property rights of married women, parent and child, guardian and ward, the rights and liabilities of infants, and kindred topics. Two weeks. Judge KINNE.

Guaranty and Suretyship. A course of lectures. One week. Judge DEEMER.

SPRING TERM.

Negotiable Instruments. Recitations in Norton on Bills and Notes. Five weeks. Professor ROHBACH.

Trial and Judgment. Lectures and procedure at law in Courts of Record from the beginning of the trial until the entering of judgment, with references to statutory provisions. Five weeks. Professor NEY.

Evidence. Recitations in Jones on Evidence. Five weeks. Judge WADE.

Criminal Law. A course of lectures accompanied with recitations in McClain's Outlines of Criminal Law and Procedure, with references also to statutory provisions. Five weeks. Professor ROHBACH..

Probate Law and Procedure. A course of lectures on the execution and probate of wills, and the law of executors and administrators, including the settlement and distribution of decedents' estates, with references to statutory provisions and examination of cases. Five weeks. Professor SEEDS.

SENIOR YEAR.

FALL TERM.

Real Property. Recitations in Tiedeman on Real Property, accompanied with oral explanations and references to leading cases and lectures on actions to recover real property. Ten weeks. Professor HAYES.

Insurance. A course of lectures on Fire, Life, and Accident Insurance. Four weeks. Chancellor MCCLAIN.

Carriers. Study of cases, McClain's Cases on Carriers (covering both carriers of goods and carriers of passengers) being used as a text-book. Six weeks. Chancellor MCCLAIN.

Criminal Procedure. Lectures with recitations in McClain's Outlines of Criminal Law and Procedure. Three and one-half weeks. Professor ROHBACH.

Chattel Mortgages. A course of instruction by lectures with a printed synopsis. Three and one-half weeks. Professor NEY.

WINTER TERM.

Equity, and Equity Pleading. Recitations in Bispham on Equity. Lectures on Equity Pleading. Eleven weeks. Professor SEEDS.

Corporations. Lectures upon the general doctrines of the Law of Corporations, both private and municipal. Seven weeks. Professor ROHBACH.

Appellate Proceedings. Lectures upon the practice and procedure in Appellate Courts. One week. Judge ROBINSON.

Taxation. A course of lectures. Two weeks. Judge KINNE.

Trial Practice. A course of lectures. One week. Judge DEEMER.

Damages. Recitations in Beale's Cases on Damages. Optional. Four weeks. Chancellor MCCLAIN.

SPRING TERM.

Partnership. Study of Cases, Paige's Cases on Partnership being used as a text-book. Four weeks. Professor HAYES.

Constitutional Law and Federal Jurisprudence. Lectures, Black's Constitutional Law being used as a text-book, and also study of selected cases. Ten weeks. Chancellor McCLAIN.

Attachment, Garnishment and Execution. Lectures, with references to statutory provisions and leading cases. Three weeks. Professor HAYES.

Justice Practice. Lectures on Practice in Justices' Courts. Two weeks. Optional. Professor SEEDS.

Pleading. An advanced course, Perry on Pleading being used as a text-book. Lectures. Three weeks. Professor HAYES.

International Law. Lectures, with recitations in Snow's Cases on International Law as a text book. Optional. Four weeks. Chancellor McCLAIN.

Studies in Collegiate Department.

For the purpose of giving the law students all the advantages of the University which it will be practicable for them to make use of, it has been arranged that so many of them as can do so without interference with the regular studies required of them in the Law Department, may attend any classes in the Collegiate Department.

Special attention is called to the opportunity thus afforded for the study of elocution (in which separate classes are organized for law students) and for pursuing any of the courses of study laid down in political science, in history, in logic, or in English. No extra charge will be made for such studies, but law students will be admitted to such classes only on the approval of the Law Faculty, and with the consent of the professor whose class they desire to enter.

Law Electives for Collegiate Students.

The Collegiate Faculty permits Seniors in that Department to take as elective studies in their collegiate course, and to receive credit therefor, any of the Junior law studies to the extent of thirty-six weeks' work of one hour a day, but this provision does not apply to students entering the Senior year from other colleges.

It is believed that, whether looked upon as a means of mental discipline, or as a preparation for the duties of citizenship or the prosecu-

tion of business, a full course in the Law Department will be found, for those who are properly prepared for it and can pursue it as a part of a liberal education, fully equal to any course of study that can be pursued for the same length of time. If, however, a student deems it not practicable for him to pursue such a course of study after graduation from the Collegiate Department, he may derive some of the advantages of such study, and some insight into the principles and methods of the system of law under which he lives, by electing as part of his regular course some of the groups of studies above given.

Credit will be given to students in the Collegiate Department taking studies in this Department for work done, but no credit can be given to those students in respect to time, the statute requiring, for admission to the bar of the State, that the applicant shall have spent at least two years of nine months each in a law school, or two years of twelve months each, in the office of some practicing attorney. Therefore, while this Department gives credit for work done in any study taken with its classes, yet it will not give credit for time unless the student taking such study or studies shall have been duly enrolled as a student of this Department.

Moot Courts.

For the purpose of affording exercise in the application of legal principles to statements of facts, and in connection with instruction in pleading and practice, moot courts have become a well recognized and important feature of the Law School. Two such courts are conducted in connection with the Department, holding their sessions on one or more afternoons of each week, each presided over by a member of the Faculty. It is deemed best to keep the members of the two classes separate in this, as in other work of the school, and it is thus possible to select the cases assigned so that they may relate to subjects on which the students have already had instruction. The Senior moot court will be organized at the beginning of the fall term, whilst that of the Juniors will not commence its work until the winter term, practical exercises in pleading being given the members of that class during the fall term, in connection with instruction in pleading and practice.

The method of conducting these courts is to give to two or more students, representing the attorneys in the case, a written statement showing the facts on which the action and defense are to be based. Pleadings are then prepared as they would be in an actual case. These pleadings are subjected to attack by motion or demurrer, and the issues of law or fact raised are tried to the court, the statement of facts being regarded as the evidence offered on issue of fact.

Another method of trial has been introduced with success, which involves the proof by competent evidence of the facts shown by the statement. This gives practice in the examination of witnesses and in applying the rules determining the admissibility of evidence. During one term, trials are conducted with all the formalities usual in *nisi prius* courts, jurors being summoned and impaneled, witnesses subpœnaed, and instructions prepared and given.

It is also recommended that the students form club courts for further exercise in pleading and practice. Professors will give such assistance in forming and conducting club courts as is needed.

Literary Societies.

Two literary societies, the Hammond Law Senate and The Forum, composed exclusively of students of this Department hold regular weekly meetings, furnishing to their members valuable training in debating and other exercises usually provided for by such organizations.

Library Facilities.

In commodious quarters on the same floor with the lecture-room is the Law library of nine thousand two hundred volumes, to which the students have personal access. This library contains a full series of the reports of the Supreme Court of the United States and of the courts of last resort of thirty-three states, including all the series of reports most frequently referred to; also the American Decisions, American Reports, American State Reports, a collection of English Reports, which, with additions lately made, is almost complete, full series of the Reporter System and a large collection of the latest and best law text-books.

The library is in charge of a regular librarian who renders valuable assistance to the students in the prosecution of their work.

The library rooms are open for the use of students from 8 A. M. to 12 M. and from 1:30 to 5:30, and 7 to 9 P. M. of each school day, and during the forenoon of Saturday.

The University library is open to the students of this Department, as well as those of the other Departments of the University, and books may be drawn from it under reasonable regulations. No extra charge is made for the privileges of either of the libraries.

Hammond Historical Law Collection.

A valuable collection of twelve hundred volumes relating principally to the Civil Law and the History of the Common Law, presented to the University by the widow of William G. Hammond, LL. D., the first Chancellor of the Law Department, is kept in the Law library as a separate collection for the use of the students of the Department and others interested in such subjects. These books are in special cases, under the charge of the Law librarian and accessible on request.

Lecture Hall.

The Law Department has the exclusive occupancy of the second floor of the central, or stone building, on the campus, which was erected for and used as the Capitol Building before the removal of the capital of the State to Des Moines. The rooms on this floor are those formerly occupied as legislative chambers. The lecture hall is furnished with arm-chairs provided with broad arm-rests for use in taking notes.

Fees and Expenses.

The rate of tuition established by the Board of Regents is $20 per term, of about twelve weeks, payable in advance, to the Secretary of the University. Each student upon passing his final examination, is required to pay the sum of $7 as a graduation fee, to cover the charge for diploma and for certificates of admission to the State and Federal Courts. There are no other fees or charges.

Other expenses may be made very reasonable. Good board and lodging can be had at from $3.50 to $4.50 per week, and this may be reduced to $2.50 or $3.00 per week by taking meals in clubs.

Cost of Books.

The books required for use in recitations, and with which the student must provide himself, are the following:

Bishop on Contracts; McClain's Synopses; Annotated Code of Iowa; Wambaugh's Cases for Analysis; Burdick's Cases on Sales; Cooley on Torts; Jones on Evidence; McClain's Outlines of Criminal Law and Procedure; Norton on Bills and Notes; Tiedeman on Real Property; McClain's Cases on Carriers; Bispham's Principles of Equity; Black's Constitutional Law; Perry on Pleading; Paige's Cases on Partnership, and the Law Bulletin.

The cost of the required books will not exceed $45.00 for the Junior year, or $70.00 for both years.

The student will find it greatly to his advantage to provide himself with a good law dictionary, and if practicable, a copy of Blackstone's Commentaries in any edition. It is desirable, also, that the student bring with him or purchase, in addition to the above list of required books, as many as practicable of the following which are recommended as the leading and best books on the subjects which are taught by lectures; Walker's American Law, or Pomeroy's Municipal Law; Schouler's Domestic Relations; Pomeroy's Remedies and Remedial Rights, or Bliss on Code Pleading; Drake on Attachment; Benjamin, or Tiedeman, on Sales; Schouler on Bailments and Carriers; Story, or Mechem, on Agency; Bates on Partnership; May on Insurance; Beach, or Morawetz, on Corporations; Curtis on Jurisdiction of Federal Courts; Cooley's Constitutional Limitations.

Any of the books mentioned may be procured through the Law librarian from time to time, as needed, at a considerable reduction from list price; they are not kept for sale by the book-stores in Iowa City.

The Department owns about twelve sets of the text-books above mentioned as required in the course, which it will rent in sets to students, furnishing them all the books required for either year for

$12.50 for the year. The rent sets do not include a law dictionary, nor the Law Bulletin. As there are sometimes more calls for rent sets than can be met, those who desire to rent books should make application in advance.

Enrollment and Preliminary Examinations.

Students may enroll at any time. It is better, however, to enter at the beginning of the term, and best to enter at the commencement of the school year.

Those who enter the Department are expected to have an English education at least equivalent to that generally given in the high schools of the State. A diploma, or certificate, showing the completion of a college or high school course, or a course of study in an academy, equivalent to a high school course, will be accepted in lieu of an examination. Students who have not such diploma or certificate, must take a preliminary examination in the usual branches of a high school course, or present such evidence of proficiency therein as the Faculty may require.

At the preliminary examination of September, 1897, each candidate was required to write a short essay, correct in expression, spelling, capitalization, punctuation and paragraphing, on any one of the following subjects, the essay not containing less than three hundred nor more than six hundred words. The subjects were:

Daniel Webster and contemporaneous history; The Monroe Doctrine; Causes leading to the War with England in 1812; The Missouri Compromise; Kansas, the struggle as to whether it should be free or slave; Penn and the Settlement of Pennsylvania; The Settlement of Jamestown.

Future examinations will be similar to the examination here described, the subjects for essays varying from year to year.

Students wishing to study special subjects without graduation will be admitted without preliminary examination upon showing themselves qualified to pursue the studies desired.

Preliminary examinations will be held on Wednesday, September 14th, 1898, commencing at 9 A. M.

Admission to Senior Standing.

A student may be admitted to the Senior class who has studied law for one school year of at least thirty-six weeks in this or some other law school, or who has studied law in this or some other law school for at least ten weeks, and, in addition, has read law under the direction of an attorney for such length of time as to make eight months' study. Time of practice as a licensed attorney in any state will be considered equivalent to a like period of reading under the direction of an attorney. If the claim for advanced standing is based upon other grounds than attendance in this school, certificates of the necessary facts must be presented when Senior standing is claimed.

In addition to the requirements as to time, it will be necessary that the applicant shall pass an examination, before admission to the Senior class, upon at least five of the principal subjects of the Junior year, and if he is a candidate for graduation it will be necessary, in addition to the five subjects before mentioned, that he shall pass upon all the subjects of the Junior year as well as those of the Senior year, at some time previous to his graduation. This rule applies to those who have been admitted to practice as well as to students of law.

The examinations for admission to the Senior class for those who have not previously completed the Junior course in the Department will commence on the first day of the University year, Wednesday, September 14, 1898.

While provision is thus made by which credit may be given for eight months' reading under the direction of an attorney, in lieu of corresponding time of attendance in this Department, not to exceed two terms, yet the Faculty desires to say frankly that the student will find it is difficult in this way to become sufficiently proficient in any of the Junior studies to pass the required examinations. The Faculty is not willing to impair the value of the Senior instruction to those who have prepared themselves for it in the Department, by admitting to the class those who are not qualified to carry on effectively the work of the year; nor is it to the interest of either the student or the school to admit to the Senior class any who, in order to be prepared for final examination and graduation, must fit themselves in so great a range of subjects that they cannot thoroughly master them. It must be borne

in mind that it is not the number of pages read, nor the number of answers learned, which determines the student's attainments in law, but that discipline and development of the mind, and the habit of correct legal thinking, are essential elements of a legal education, and that for the acquisition of these, two years in a law school are not too long a time even for those who have the best preparation for entering. Experience has shown how imperfect, as a rule, is the preparation of those who study in offices, and how necessary systematic instruction is at the beginning of the student's course, and the Faculty strongly recommends that all the studies of the Junior year be pursued in the law school and that if but one year can be spent in school, the student shall commence his studies there and read in an office afterwards. Even those who have had previous reading in an office will, it is believed, usually find the instruction in the Junior year to be of greater importance to them than that of the Senior year in obtaining a thorough and accurate knowledge of the law. The practical advantages of experience in a law office are not to be underrated, but such experience will prove of greater benefit after the principles of law have been acquired than at the beginning of the study.

Even in courses in which text-books are used students of the law school have a great deal of instruction regarding matters not fully developed in the books. Anyone who wishes to pass with credit the examinations for Senior standing, and to profit fully by the instruction in the Senior subjects, should not confine his attention to the Junior text-books, but should attempt to get an equivalent for the instruction supplementing those books. Candidates for advanced standing on office reading are therefore urged to master in addition to the prescribed text-books, the following books or parts of books: Pomeroy's Remedies and Remedial Rights; Anson on Contracts; Pollock, or Bigelow, on Torts; Bishop's, or McClain's, Criminal Law; Tiedeman on Sales; Schouler on Bailments; Stephen's Digest of Evidence; Daniel on Negotiable Instruments.

Graduation.

Two years' study is essential to graduation, one year of which must have been spent in this school.

Students will be given credit for time of study in another school to

the extent of one year, or under the direction of a practicing attorney to the extent of two-thirds of a year. For time of actual practice as a duly licensed attorney, the same credit will be given as for study under the direction of an attorney.

Before being recommended for graduation, the candidate who has pursued a portion of his studies elsewhere, must satisfy the Faculty of his proficiency in those studies by passing examinations therein.

Candidates for graduation must be of good character and must, upon being recommended by the Faculty, pass a final examination conducted at Iowa City by a committee of examiners appointed by the Supreme Court of Iowa, in accordance with the rules of that court regulating admission to the bar. Upon passing such examination, the candidates receive the degree of Bachelor of Laws, and are admitted to practice in all the courts of the State of Iowa, and in the federal courts of the Northern District of Iowa, oaths of admission being administered in connection with their graduation; and they receive the usual diplomas, and certificates of admission. Those who are not twenty-one years of age may pass the examination and receive their diplomas, but cannot be admitted to practice until attaining that age.

Final examinations will be held only at the end of the University year.

Theses.

Each candidate for graduation in June, 1898, must present to the Faculty, on or before the first Monday in April, a thesis upon some legal topic approved by the Faculty. Such thesis must be legibly written, or printed by typewriter, on paper 8 x 10½ inches in size of page, leaving a blank margin of at least one inch at sides and at top and bottom. The thesis shall not be less than 1,500 nor more than 2,500 words in length, exclusive of citations of authorities. In citing cases the names of the parties, as well as the volume and page of the report, must be given. The character of the thesis will be taken into account in determining whether the candidate is qualified to be recommended to the Examining Committee for final examination.

All theses become the property of the Department.

The subjects approved by the Faculty for the year 1897-98 are as follows:

1. Discuss the right of recovery and extent of recovery under a fire insurance policy for loss of property in which the insured has but a limited interest.

2. Discuss the right of recovery against a telegraph company for negligence in transmitting a message which is in cipher or is otherwise obscure as to its meaning.

3. Discuss the right to recover damages for fright or other mental disturbance and the consequences thereof.

4. Discuss the basis and extent of the doctrine of freedom of contract.

5. Discuss the various applications of the rule as to measure of damages announced in *Hadley v. Baxendale*, 9 Ex. 341.

6. What is the limit of legislative power in respect to passing statutes providing that relatives of a pauper shall be liable for his support?

7. In the absence of proof on the subject is there any presumption that the statutes of another State are the same as those of the State where the action is brought?

8. Discuss the competency of subscribing witnesses to a will as experts on the question of the mental condition of the testator.

9. Does the fact that a person otherwise occupies the relation of heir to one whom he has murdered, prevent his inheriting from his murdered ancestor?

10. Are there any acts which are torts or not, according to whether they are done maliciously or not?

11. Discuss the liability for loss occasioned to holder of promissory note by negligence of banker to whom it had been sent by the holder for collection, by reason of the fact that the banker had failed to take those steps which would have made the note collectible against maker or indorser.

12. Has the Federal Government authority to pass laws with reference to extradition of fugitives from justice from jurisdiction of State and provide machinery for enforcement of demands of the State from which offender is fugitive?

13. Discuss the authority of the courts to restrain persons from carrying out such threatened acts as would, if consummated, result in disturbances of the peace.

14. Would trial in civil cases before three persons learned in the law, who should be judges of both the law and the facts, a majority opinion being sufficient to determine the rights of the parties to the action, be preferable to present trial by jury?

15. Discuss the constitutionality of Summary Jurisdiction and the reasons upon which the utility of such procedure is based.

16. Would the exercise by incorporated towns or cities of the power of eminent domain so as to condemn private water works for public use be constitutional?

17. Does the Statute of Frauds render a contract void or voidable?

18. Is a special assessment rendering the owner of abutting property liable for street improvements, in excess of the value of the property, constitutional?

19. Can a court take notice of the provisions of the *Carlisle Tables* if they have not been introduced in evidence?

20. Discuss the right of action on a contract in favor of a person not a party thereto.

21. Discuss the effect of *Rylands v. Fletcher*, L. R. 3 H. L. 330, as shown by subsequent decisions.

Prizes.

From the theses prepared and presented upon some one of the subjects selected for the year 1896-97, it was provided that a committee chosen by the Faculty of the Department from the Examining Committee would select the five which had the highest merit as legal essays. To the writer of the one of these five which had the highest literary merit, from the standpoint of clearness, conciseness, and accuracy of expression, was to be awarded the first prize.

Beginning with the class of 1898, all theses prepared and presented as above described, will be examined by the Faculty of the Department for the purpose of determining whether the writer is qualified for graduation.

No prizes for theses will be offered after June, 1897.

The prizes for 1896-97 were awarded as follows:

The first prize to Mack J. Groves. The other prizes, all being equal in rank and value, were divided among the following stu-

dents, named in order of merit determined by the committee: Samuel C. Smith, Ph. B., Paul F. Cooper, Andrew W. Mercer, John L. Corrigan, Earl B. Brockway, A. B., Edmund Pendleton, B. L., Edwin B. Wilson, Ph. B., Charles W. E. Snyder, A. B., with special mention of the theses written by the following: Samuel B. Lattner, Albert O. Wakefield, A. B., Walter C. Burrell, and Wirt P. Hoxie.

Any further information desired may be obtained by addressing the President of the University, or James A. Rohbach, Secretary of the Law Faculty, at Iowa City, Iowa.

Medical Department.

Faculty and Other Instructors.

CHARLES ASHMEAD SCHAEFFER, A. M., PH. D., LL. D.,
President.

PHILO JUDSON FARNSWORTH, A. M., M. D.,
Emeritus Professor of Materia Medica and Therapeutics.

JOHN CLINTON SHRADER, A. M., M. D., LL. D.,
Professor of Obstetrics, Gynecology, Clinical Gynecology and Diseases of Children.

WILLIAM DRUMMOND MIDDLETON, A. M., M. D.,
Professor of Surgery and Clinical Surgery and Dean of the Faculty.

LAWRENCE WILLIAM LITTIG, A. M., M. D., M. R. C. S.,
Professor of Theory and Practice of Medicine and Clinical Medicine and Assistant to the Chair of Surgery.

JAMES RENWICK GUTHRIE, A. M., M. D.,
Professor of Physiology and Associate Professor of Obstetrics, Gynecology and Diseases of Children.

ELBERT WILLIAM ROCKWOOD, B. S., M. D.,
Professor of Chemistry and Toxicology, Director of the Hospital, and Secretary of the Faculty.

JAMES WILLIAM DALBEY, B. S., M. D.,
Professor of Ophthalmology.

CHARLES S. CHASE, A. M., M. D.,
Professor of Materia Medica and Therapeutics.

WALTER L. BIERRING, M. D.,
Professor of Histology, Pathology and Bacteriology, and Curator of the Medical Museum.

JOHN WALTER HARRIMAN, M. D.,
Professor of Anatomy.

MARTIN J. WADE, LL. B.,
Professor of Medical Jurisprudence.

CHARLES MOORE ROBERTSON, A. M., M. D.,
Professor of Otology, Rhinology and Laryngology.

WILLIAM ROBERT WHITEIS, M. S., M. D.,
Assistant Professor of Histology.

GERSHOM HYDE HILL, A. B., M. D.,
Lecturer on Insanity.

FRANK THOMAS BREENE, D. D. S., M. D.,
Lecturer on Dentistry.

EMIL LOUIS BOERNER, PHARM. D.,
Instructor in Pharmacy.

WILLIAM EDWARD BARLOW, A. B.,
Demonstrator of Chemistry.

WILBER JOHN TEETERS, B. S., PH. C.,
Demonstrator of Chemistry.

LEE WALLACE DEAN, M. S., M. D.,
Demonstrator of Anatomy.

JOHN THOMAS MCCLINTOCK, A. B., M. D.,
Demonstrator of Pathology and Bacteriology.

WILLIAM GREEN,
Janitor.

MEDICAL DEPARTMENT.

A thorough elementary preparation is required before entering on the course of medical lectures. The University affords a preliminary scientific course preparatory to the professional, and it is expected that many will avail themselves of this opportunity. In the branches of medicine there should be a thorough training in principles before the practical portion is begun. For this purpose a careful presentation of the subjects is made by lectures, and the knowledge fixed by recitations and frequent reviews. Ample means of illustration are used, and the materials for demonstration are abundant. In the practical branches abundant clinical material is found to illustrate the subjects taught.

The twenty-ninth annual course of lectures will begin on September 14, 1898, and will close on March 29, 1899. There will be a holiday vacation commencing Thursday evening, December 22, and ending Wednesday morning, January 4, 1899.

The course is divided into four years of twenty-six weeks each. It is the intention of the Board of Regents and the Faculty to increase the length of the annual course of lectures as soon as possible, and notice of such increase may appear in the next annual announcement.

Medical, Surgical, Gynecological, Ophthalmological, Aural, Laryngological and Rhinological Clinics, are held each week during the term. Attendance upon these is required of all students, excepting those engaged in laboratory work during clinic hours.

Outline of the Plan of Instruction.

Anatomy.

The lectures in anatomy will be illustrated by means of specimens, charts, models, dissections and black-board figures. Special effort will be made to associate anatomical arrangement with clinical facts and methods of diagnosis.

During the first year the lectures will cover the subjects of osteology, syndesmology, the alimentary canal and associated structures, the vascular and respiratory systems, and the genito-urinary organs. These will be presented in full detail from their anatomical, mechanical and functional aspects, attention being paid to practical developmental laws and relations of viscera to surface markings and neighboring structures.

In the second year the subjects covered during the first year will be carefully reviewed with additional reference to the medical and surgical anatomy. The nervous system and the anatomy of the special senses will be presented in detail not only by lectures but also by practical demonstrations to the class divided into small sections.

The third year will be devoted entirely to regional anatomy. The lectures during this year will at all times be illustrated by special dissections or surface marking upon the living subject.

Practical Anatomy.

The thorough study of this branch, for at least four courses, is made a condition of graduation. Facilities for obtaining material are such, under improved legislation in the State, that an abundance will be provided for all who may apply. The demonstrators will always be ready to aid and direct the prosecution of these studies.

Upon the completion of each course of dissection, the student will be examined on the anatomy of the part dissected, and if the examination be satisfactory, a certificate to that effect will be given. No fee is required for dissecting material.

Physiology.

In this subject the inductive method is very largely employed in imparting instruction. The lectures are profusely illustrated by means of charts, diagrams and blackboard figures, and the student is rendered practically familiar with the phenomena of the most important normal functions of the body by the employment of experiments upon living animals as a means of demonstration. Twelve lectures will be given in the Junior year upon applied physiology of the nervous system.

Chemistry and Toxicology.

The course in chemistry extends through two years. In the first year the lectures are on general chemistry. The laboratory work consists, first, of analytical chemistry, including methods of testing for the metallic poisons, then the common medicinal substances are studied. The student learns methods of chemical manipulation, and the use of apparatus, and also becomes acquainted with the action of reagents and of chemicals upon each other. The course includes the examination of drinking water from a sanitary standpoint, each student making a number of analyses of various wholesome and polluted waters. It concludes with the methods of quantitative analysis, which are of the most use to the medical practitioner.

In the second year, physiological chemistry is taken up. The lectures are in explanation and amplification of the laboratory work. The latter includes the study of the proximate principles of the body and their chemical changes. Artificial digestive experiments are made, their products being isolated and tested. The constituents of the blood are tested and the methods for the identification of stains are learned. The qualitative tests for the abnormal constituents of the urine follow, and the quantitative determination of such as are of importance. The course is completed by the identification of urinary sediments and calculi, and the analysis of various pathological specimens of urine. The lectures on toxicology treat of the physiological and chemical action of the principal poisons, as well as their antidotes. The methods of identifying these in food, excreta, etc., are explained and illustrated by experiments.

The work in practical chemistry is conducted in the chemical laboratories of the University, in which the Medical Department occupies rooms on the ground floor. These consist of rooms for the instructors, store rooms, and two large laboratories. They are well lighted and heated by steam. Hoods, connected with ventilating shafts, carry off offensive and injurious gases. The outfit is ample for demonstrating the general principles of chemistry, as well as its application to medicine. Each student is supplied with a set of the necessary apparatus.

Histology.

The course in histology extends through the Freshman year and consists of a series of two didactic lectures and four hours laboratory work each week.

The histological laboratory, situated on the first floor, southeast corner of the Medical Building, is well lighted and thoroughly equipped with microscopes and all necessary apparatus for carrying on the work. The laboratory work comprises the preparation and study of microscopic slides showing the minute structure of the different tissues and organs of the body.

The slides prepared by each student become his personal property.

Instruction is given in all forms of histological technique, hardening, embedding, section-cutting, staining and preparation of material for examination.

In the Freshman year the regular work in histology is preceded by a number of lectures and laboratory hours devoted to the study of general biology.

During the Sophomore year opportunities are offered to those who wish to work in embryology and special histology.

Pharmacy.

An outline course in pharmacy is specially provided whereby the student at the outset may familiarize himself with pharmaceutical processes and the methods of preparing official preparations by actual laboratory practice.

Materia Medica.

This subject is presented during the Freshman and Sophomore years in progressive form. The introductory topics, such as definitions, dosage, modes and routes of administration of medicines, prescription writing, with special reference to the detection and avoidance of incompatibilities, will be presented at the beginning of each session before the classes jointly. The further consideration of the subject will be progressive, organic drugs being presented one session, inorganic the next. At the close of each session a test will be given cov-

ering the ground traversed during the session. Toward the close of the Sophomore year the entire subject will be reviewed and a final examination given. During the didactic lectures crude drugs will be presented from time to time illustrative of the subject. All official preparations from the same will be presented and briefly discussed during the course.

Therapeutics.

This branch of pharmacology, recognized as the distinctively scientific division of the subject, will be presented during the Sophomore and Junior years. Both general and special therapeutics will be outlined and discussed with special view to stimulate in the student a desire to prosecute methods of original research in the direction of studying the physiological action of drugs. To this end experiments will be made from time to time illustrative of such action upon the lower animals.

Applied Therapeutics.

In addition to the general course in therapeutics the Senior class is given a special course upon applied or practical therapeutics, to be illustrated by bedside discussion of cases in the wards of the University Hospital.

Pathology and Bacteriology.

The course in pathology and bacteriology extends through the Sophomore, Junior and Senior years, and is presented by means of didactic lectures and laboratory work. The lectures are devoted to bacteriology and general and special pathology, and are illustrated by means of drawings, preparations from the Medical museum and specimens derived from post-mortem examinations.

The pathological and bacteriological laboratory is situated in the west hall on the second floor of the Medical Building. It is thoroughly equipped with new microscopes of the most modern type, and all apparatus necessary for carrying on every form of bacteriological research. Each student is provided with a table, which includes a microscope and all necessary staining reagents.

In the Sophomore year the lectures are confined to general pathology and the elementary principles of bacteriology. The laboratory work consists of two hours each week throughout the year, and is illustrative of the didactic lectures, comprising the preparation and study of slides showing the general pathological changes that occur in human tissues. An examination will be held at the close of the year.

In the Junior year the lectures are devoted to the pathology of tumors, and the special pathology of the different organs of the human body.

The laboratory work, consisting of two hours a week throughout the year, bears a direct relation to the lectures and comprises the preparation and study of slides showing the disease changes that occur in special tissues and organs, including a complete collection of tumors; furthermore embodying the study of the general characteristics of micro-organisms, the preparation of artificial media, and the mounting of slides of the different organisms, with special reference to the pathogenic bacteria that are of great interest to medica men.

Instruction is also given in the technique of making a post-mortem examination.

A final examination in pathology will be held at the close of the Junior year.

During the Senior year two hours each week are devoted to clinical microscopy, and advanced work in pathological histology and bacteriology.

Beginning the Thursday after Commencement, at 1:30 P. M., there is given a private course in practical bacteriology, which continues for one month. The laboratory is open daily from 9 A. M. to 6 P. M., and the students become familiar with all the details of bacteriological technique. The number of participants is limited to twenty. To secure a place at a table $5 must be paid March 1. The rest of the fee is payable at the opening of the course.

Practice of Medicine.

The Chair of Theory and Practice of Medicine combines didactic and clinical instruction. Many of the subjects treated in the didactic course find illustration in the hospital amphitheatre, and pathological

study is facilitated by post-mortem examinations, as well as by wet and dry preparations from the museum.

Medical Diagnosis.

Recitations for the Senior class will be held each week on this subject, the department of medical diagnosis receiving practical treatment here as well as at the clinic. The Sophomore class will receive practical instruction in physical diagnosis, including the use and application of all the instruments and methods of precision.

Surgery.

Surgery is taught didactically in lectures reviewed by daily class quiz with recitation by advanced students on prior work, and practically by actual surgical diagnosis and treatment of patients at the clinic by the members of the Senior class; also by a course of operative surgery for the Senior class in which all surgical operations are performed upon the cadaver. One hour each week is devoted to minor surgery and bandaging.

Obstetrics and Gynecology.

The instruction in these important subjects is complete. All modern means for illustration are employed, and advanced students are carefully trained in the principal obstetric operations.

Ophthalmology.

The instruction in this branch combines didactic and clinical teaching. One lecture a week is given in the anatomy, physiology and pathology of the region involved, and the Wednesday clinic is devoted to the diagnosis and treatment of its diseases. A large number of cases appear at these clinics, and a great many operations of all kinds are performed.

Otology, Rhinology and Laryngology.

The instruction in these branches is given by didactic and clinical teaching, one lecture and one clinic being given each week. Much attention is directed to the methods of examination and treatment of

cases. The ear, nose and throat clinic being large it enables students to become familiar with the use of instruments, all being allowed to treat patients under the supervision of the instructor. It is the aim of the course to familiarize each student with the normal as well as the pathological conditions of the several organs. The clinic room has been especially fitted up for the work and is in itself complete.

Medical Jurisprudence.

The essentials, to the practitioner, of this important department of medicine will be fully treated.

Insanity.

This subject is discussed as concisely as possible, with the special needs of the general practitioner constantly in view, and material appearing at the clinics from time to time, during the term, is utilized in illustration. A course of lectures on this subject will be delivered during the latter part of January.

Sanitary Science and Public Hygiene.

One lecture a week will be delivered on matters pertaining to sanitary science and public hygiene.

Clinics.

The clinics have been well and abundantly supplied with material. The patronage of the hospital is such that a variety of cases is presented for operation and treatment. The hospital is open for the reception of patients during the entire year.

Every case is fully utilized as a means of instruction by a system of examination in which advanced students are required to diagnosticate disease and suggest treatment, before the class, subject to the correction of the clinical teacher.

Clinical Patients.

Medical cases should be referred to Professor L. W. Littig; surgical cases to Professor W. D. Middleton; gynecological cases to Professor J. C. Shrader; eye cases to Professor J. W. Dalbey; ear, nose and throat cases to Professor C. M. Robertson.

Medical Museum.

The museum contains a large and interesting collection of morbid and other specimens, furnishing valuable aid to instruction in its large amount of material illustrative of pathological and normal conditions. This is constantly drawn upon as a means of demonstration.

Physicians are earnestly requested to send to the curator any specimens of healthy, morbid, or comparative anatomy; for all such favors due credit will be given by labeling the specimens with the name of the donor before placing them in the museum.

Medical Library.

The Ranney Memorial Medical Library, consisting of a large number of works especially devoted to insanity and mental diseases, is open for consultation, together with a well selected list of books on general medical subjects to which are added each year the latest works and the latest editions. The library is supplied with the current medical journals, and will be open every day of the session. Medical students have also the privilege of drawing books from the general library of the University.

OUTLINE OF THE COURSE.

Freshman Year.

LECTURES AND RECITATIONS, EACH WEEK.

Anatomy—Four lectures; one recitation.
Physiology—Three lectures; one recitation.
General Chemistry—Three lectures; one recitation.
Laboratory work for the session as follows:
Materia Medica—organic—Two lectures; one recitation.
Histology—Two lectures; one recitation.
Chemistry—One hundred and sixty hours.
Biology and Histology—One hundred hours.
Bandaging—Twenty hours.

Dissecting—Two courses.

Final examination in General Chemistry, Histology and Pharmacy, also, examination (not final) in Physiology, Anatomy and Materia Medica.

Sophomore Year.

LECTURES AND RECITATIONS, EACH WEEK.

Anatomy—Four lectures; one recitation before holidays, two after holidays.

Physiology—Three lectures; one recitation before holidays, two after holidays.

Physiological Chemistry—Two lectures.

General Pathology and Bacteriology—Two lectures.

Materia Medica—Organic: two lectures; one recitation. Inorganic: one lecture until holidays.

Therapeutics—One lecture after holidays.

Obstetrics—Two lectures.

Physical Diagnosis—One hour.

Hygiene—One hour.

Pharmacy—Ten lectures during the session.

Laboratory work for the term as follows:

Chemistry—Sixty hours.

General Pathology—Fifty hours.

Dissecting—Two courses.

Pharmacy—Thirty hours.

Embryology—Optional.

General University clinics, when not otherwise engaged.

Final examination in Anatomy, Physiological Chemistry, Physiology, Materia Medica and General Pathology.

Junior Year.

LECTURES, RECITATIONS AND CLINICS, EACH WEEK.

Theory and Practice of Medicine—Five lectures; one recitation.

Surgery—Three lectures; one recitation.

Pathology—Two lectures; one recitation.

Therapeutics—Two lectures.

Obstetrics—Two lectures; one recitation.

Gynecology—Two lectures; one recitation.

Toxicology—One lecture.

Applied Anatomy: Medical, Surgical and Nervous—One lecture.

Applied Physiology of the Nervous System—Twelve lectures during the session.

General Medical, Surgical, Gynecological and Ophthalmological Clinics—Seven hours.

Laboratory work for the term as follows:

Pathology—Fifty-two hours.

Bacteriology—Twenty-six hours.

Final examinations in Obstetrics, Therapeutics and Special Pathology.

Senior Year.

LECTURES, RECITATIONS AND CLINICS, EACH WEEK.

Theory and Practice of Medicine—Five lectures; one recitation.

Surgery—Three lectures; one recitation.

Practical Therapeutics—One hour until the holidays.

Gynecology—Two lectures; one recitation.

Ophthalmology—One lecture.

Otology, Rhinology and Laryngology—One lecture.

Dermatology—One lecture after holidays.

Pædiatrics—One lecture after holidays.

Operative Surgery—Twelve hours during the session.

Operative Obstetrics—Twelve hours during the session.

Medical Jurisprudence—Twelve lectures during the session.

Dentistry—Five lectures during the session.

Insanity—Twelve lectures during the session.

General Medical, Surgical, Gynecological, Ophthalmological, Aural, Rhinological and Laryngological Clinics—Seven hours.

Laboratory work:

Clinical Microscopy—Two hours a week.

Final examination in Practice of Medicine, Surgery, Gynecology, Ophthalmology, Ear, Nose and Throat.

Text-Books and Books of Reference.

The following are recommended by the Faculty:

Medical Dictionary—Gould, Duane, Dunglison.

Anatomy—Gray, Quain, Morris, Treve's Surgical Applied Anatomy.

Dissectors—Holden, Heath, Ellis.

Comparative Anatomy—Wiedersheim, Jeffery Bell, Howell.

Physiology—Landois and Stirling, Foster, Flint, Kirk.

General Chemistry—Simon, Witthaus, Roscoe, Schorlemmer.

Urine Analysis—Purdy, Neubauer, Vogel, Black.

Toxicology—Wormley, Taylor, Woodman and Tidy.

Surgery—Park, American Text-Book of Surgery, Roberts, Wyeth, Gerster, Stimson on Fractures and Dislocations, Wharton's Minor Surgery and Bandaging, MacDonald.

Pathology—Ziegler, Thoma, Delafield and Prudden, Green.

Bacteriology—Abbot, McFarland, Crookshank, Sternberg.

Practice of Medicine—Tyson, Wood and Fitz, Osler, Strumpel, American Text-Book of Theory and Practice of Medicine, Roberts, Flint, Bartholow, Loomis.

Medical Diagnosis—Vierordt, Musser, DaCosta, Flint.

Obstetrics—American Text-Book of Obstetrics, Lusk, Davis, Parvin, Leishman, Playfair, King, Dorland.

Obstetric Surgery—Grandin and Jarmin.

Embryology—Minot, Manton.

Gynecology—Skene, Thomas and Munde, Garrigues, American Text-Book, Pozzi, Davenport, May's Manual, Clinical Gynecology, Keating and Coe.

Materia Medica—White and Wilcox, Potter, Bartholow.

Therapeutics—Hare, H. C. Wood, Potter, Farquharson.

Diseases of Children—Starr's American Text-Book, J. L. Smith, Goodhart.

Medical Jurisprudence—McClellan's Civil Malpractice, Wharton and Stille, Beck, Elwell.

Histology—Stoehr, Piersol, Schafer, Stirling.

Ophthalmology—Fuchs, Juler, Noyes, Nettleship on the Eye.

Otology, Laryngology and Rhinology—Burnette, MacBride, Bosworth, Roosa, Buck, Politzer, Sajous, Browne.

Insanity—Lewis' Text-Book of Mental Diseases, Stearn, Clouston's Mental Disease.

Dermatology—Jamison, Hyde, Duhring, Crocker.

Hygiene and Sanitary Science—Wilson, Rohe, Buck.

The first book mentioned in the foregoing list is recommended for preliminary reading, with the exception of chemistry. In this, Remsen's Introduction to the Study of Chemistry is recommended.

Text-books and books of reference can be obtained at an average cost per volume of from $3.00 to $5.00, or $15.00 to $20.00 per year.

It is of far greater advantage to the student, during the college course, to study and review a single text-book in each department than to read several cursorily. It is, therefore, advised that a single work, in each department recommended above, be chosen and carefully studied, while any other may be used for reference and subsequent perusal. The first one of each of the above lists is preferred.

Tuition.

The fee for tuition is $65.00 for each year, of which $40.00 is payable at the opening of the term, and the balance on or before January 10. All fees must be paid when due to the Secretary of the University, William J. Haddock, and students who do not pay these when due will be suspended from the Department until payment has been made.

In the combined course the fees are $25.00 for each of the first two years and $75.00 for each of the last four years of the course. Students entering the Medical Department from schools of pharmacy, dentistry, or veterinary medicine with advanced standing will pay $10.00 for dissecting material used in making up deficiencies in this branch. For students taking a partial course the fees are $10.00 per year for each branch except dissecting where the fee is $15.00.

There are no extra fees whatever, but for each laboratory course in chemistry, also for that in practical pharmacy, there is required a deposit of $3.00 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement is now in effect, and will be understood to

apply to all students in the Department, entirely irrespective of the date of matriculation.

Alumni of this Department will be admitted to lectures and clinics free of charge, but will pay the usual laboratory fees. Graduates of other colleges which are recognized by this Department will be admitted to full lecture privileges upon paying the matriculation fee and a fee of $10.00 and the usual laboratory fees. The laboratory fee is $5.00 for each practical course.

A certificate of attendance will be issued to each student at the close of the session.

Students upon arrival will apply for all needed information to the Secretary, Dr. E. W. Rockwood.

Requirements for Admission.

1. Credible certificate of good moral character signed by two physicians of good standing in the state from which the applicant comes.

2. Graduates or matriculates of respectable colleges or graduates of high schools of the first grade, or of normal schools established by state authority, may be admitted without examination upon presentation of satisfactory credentials, provided, that in each case, at least one year of Latin has been included in the course. All candidates for admission must present their credentials or apply for a permit for examination at the office of the President of the University not later than noon of Tuesday, September 13, 1898.

Examination for admission will embrace the subjects usually taught in the high schools of Iowa, including one year's Latin, which subject may, however, be made up before entering upon the second year's course. In September, 1898, those who have no diploma will be examined in Latin (one year), Physics (one year), English, U. S. History, Arithmetic, Algebra through Quadratics, plane and solid Geometry and Botany or some other science.

3. Students entering from other medical schools with advanced standing must be examined as stated above.

This school is a member of the Association of American Medical Colleges, and adheres to the requirements of that Association.

Combined Scientific and Medical Course.

Arrangements have recently been made with the Faculty of the Collegiate Department by which it will be possible for a student to complete the course in Science and the course in the Medical Department in six years, thereby obtaining the degrees B. S. and M. D. This combined course is especially recommended to all students who intend to enter the profession of medicine. See pages 33 and 34 of Catalogue.

COMBINED COURSE LEADING TO THE DEGREES OF B. S. AND M. D.

(Subjects printed in italics are to be taken in the Collegiate Department.)

First Year.

German, 5, or *Latin*, 4 or 5.*

Mathematics, 5.

Drawing or *History*, 2.

English, 3.

Military Drill, 3.

Second Year.

German, 3, and *English*, 2; or *German*, 3, and *Economics*, 2; or *Latin*, 5; or *Greek*, 5.

Physics, 5.

Animal Morphology and *Physiology*, 5; or *Systematic Zoology*, 5.

Military Drill, 3.

Third Year.

French, 5; or *Greek*, 5; or *Latin*, 5. (At least one year of *Latin* required.

Animal Morphology and *Physiology*, 5.

Chemistry, 5.

Botany (fall and winter) and Histology (spring), 5.

Anatomy (fall and winter) and Dissection (spring), 4.

Military Drill, 3.

*The figures refer to the number of exercises a week.

Fourth Year.

Anatomy, 5.
Physiology (Medical), 4.
Physiological Chemistry, 2, with laboratory work.
General Pathology, 2.
Materia Medica, 3.
Obstetrics, 2.
Physical Diagnosis, 1.
Bandaging, 1.
Pharmacy, 40 hours.
Dissecting when possible.
Embryology and Bacteriology (spring).
Clinics when not otherwise engaged.

Fifth Year.

Junior Medical, with *electives* in the spring term.

Sixth Year.

Senior Medical, with *electives* in the spring term.

Advanced Standing.

Students from other accredited medical colleges who have attended one course of lectures, will be admitted to the Sophomore class upon passing an examination in the branches taught during the first year.

Those who have attended two courses will be admitted to the Junior class upon passing an examination in the branches taught during the first and second years.

Those who have attended three courses will be admitted to the Senior class upon passing an examination in the branches taught during the first, second, and third years.

Graduates in Pharmacy, upon examination as above, may enter the Sophomore class.

Graduates of Dental schools in good standing, will be admitted to the Sophomore class upon passing the entrance examination only.

Graduates from Veterinary colleges in good standing, will be admitted to the Sophomore class upon passing the entrance examination.

Those entering the Sophomore year from Pharmacy, Dental, or

Veterinary schools must at the close of the year pass examinations in all branches of the Freshman year not previously pursued by them, and must have completed the work required of the Sophomore class in the dissection of the human subject.

In all cases those who enter from other schools with advanced standing must comply with the requirements for admission, page 157.

Requirements for Graduation.

1. The candidate must be twenty-one years of age.
2. He must be known to be of unexceptionable moral character.
3. The time of study must include attendance upon at least four full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures shall not be less than six months of twenty-six weeks, and not more than *one* of the four courses shall be within the same year.
4. The candidate must have satisfactorily completed at least four courses in Practical Anatomy.
5. The deportment during the term must have been unexceptionable.
6. Attendance upon all lectures, clinics and other instruction in the course must have been in accordance with the requirements of the department.
7. All members of the Freshman class will be examined in General Chemistry, Histology, Physiology, Anatomy and Materia Medica at the end of that year. The examination in General Chemistry and Histology will be final should the student show the required proficiency.
8. Members of the Sophomore class at the end of that year must pass satisfactory examinations in Anatomy, Physiology, Physiological Chemistry, General Pathology, Materia Medica and Pharmacy.
9. Members of the Junior class will be given a final examination at the end of the year in Obstetrics, Therapeutics and Special Pathology.

In case of failure to pass any of these examinations, the student may be re-examined at the opening of the next session. If he fail in this second examination, he will be allowed to present him-

self for re-examination only after attendance upon another course of lectures.

Students of the Senior class must notify the Secretary of the Faculty in writing, during the second week in February, of their intention of becoming applicants for the degree of Doctor of Medicine, at the same time presenting a certificate of legal age and of good moral character, also the receipts from the Secretary of the University, showing that all fees have been paid.

During the last week of the term, having complied with the other requirements, they must pass a satisfactory examination in Practice of Medicine, Surgery, Ophthalmology, Obstetrics and Gynecology, Ear, Nose and Throat and in any other subjects taught, if so directed by the Faculty at the beginning of the term.

Class standing, recitation marks, together with demonstrators' reports and final examinations, will be taken into consideration when determining the candidate's fitness to receive the medical degree.

Medical Building.

The Medical Building is located on the south end of the campus, in a line with the other University buildings. It is one of the best and most commodious medical college buildings in the west. It comprises a basement for general purposes, the first floor containing the Secretary's office, the professors' rooms, the histological laboratory, the medical library and reading room, a lecture room and the janitor's room.

On the second floor is a spacious and well-lighted pathological and bacteriological laboratory supplied with a sufficient number of microscopes for class-work and with other appliances, prosector's room, and general Faculty room, and a large amphitheatre provided with opera chairs for two hundred and sixty-six students.

The whole of the third floor (80x36 feet) used as a dissecting room, is supplied with sinks and water, and each table is lighted with gas.

The whole building is heated with steam and is well ventilated.

University Hospital.

The Twenty-sixth General Assembly levied a tax for the erection of new buildings for the University, and by the action of the Board of Regents the first year's tax, somewhat more than fifty thousand dollars has been devoted to the building and equipment of a Hospital which was opened for the reception of patients in January, 1898. The University Hospital is in all respects modern and without a superior in the west. With an administration building thoroughly furnished, with large and commodious wards as well as private rooms, with a clinical amphitheatre that will comfortably seat two hundred or more, and with separate surgical, gynecological, medical, ophthalmological and laryngological operating rooms together with a well supplied Free Dispensary open throughout the year, but little is left to be desired.

It is confidently believed that the students who make the Medical Department of the University the school of their choice will find in all its departments complete and perfect equipment, both for didactic and illustrative instruction.

University Training School for Nurses.

Connected with the Medical Department of the University, the School for Nurses offers a three years' course to women who desire to enter the profession of nursing. The course comprises theoretical work in class, practical work in wards, and a complete course in invalid cookery. Lectures will be given by members of the Medical Faculty, and the Superintendent upon Anatomy, Physiology, Materia Medica, Chemistry of Foods and Nutrition, Bacteriology, Obstetrics, Gynecology, Diseases of Eye, Ear, Nose, and Throat, Diseases of Children, Bandaging, Medical, Surgical, and Obstetrical Nursing.

Candidates may be admitted when vacancies occur. For further information application should be made to the Superintendent, Miss Jennie S. Cottle, University Hospital.

Resident Physicians.

Appointments as Resident Physicians and others in State and other institutions are made each year from the graduates of the Medical

Department. These are awarded to such of the applicants as the Faculty judges best prepared for the position, the successful candidates being allowed to select, in the order of their rank, from those positions which are available.

In March, 1898, the following named graduates were appointed:

Dr. Charles E. Wright, Mercy Hospital, Davenport.

Dr. Francis A. Ely, University Hospital.

Board in Iowa City can be obtained for from $2.00 to $3.00 a week; rooms from $2.00 to $8.00 a month. Many students procure rooms and board in clubs, which materially reduces the cost.

Necessary Yearly Expenses.

Tuition fee, which includes all charges except laboratory breakage	$ 65	$ 65
Breakage	1 to	2
Room rent, 6 months	12 to	48
Board, 26 weeks	52 to	78
Fuel and light	6 to	15
Books	12 to	20
Total	$148 to	$228

Graduates of this school are requested to acquaint the Secretary of the Faculty immediately with their postoffice addresses, and to inform him promptly of any change of residence.

For any further information address Dr. E. W. Rockwood, Secretary of the Medical Faculty, Iowa City, Iowa.

Homoeopathic Medical Department

Faculty and Assistants.

CHARLES A. SCHAEFFER, A. M. PH. D., LL. D.,
President.

WILMOT H. DICKINSON, M. D.,
Professor of Theory and Practice and Clinical Medicine, and Dean of the Faculty.

JAMES G. GILCHRIST, A. M., M. D.,
Professor of Surgery and Surgical Gynecology, and Registrar of the Faculty.

CHARLES H. COGSWELL, M. D.,
Professor of Obstetrics and Diseases of Women.

FRANK J. NEWBERRY, M. S., M. D., O. et A. Chir.,
Professor of Ophthalmology, Otology and Pædology.

GEORGE ROYAL, M. D.,
Professor of Materia Medica and Therapeutics.

THEODORE L. HAZARD, M. D.,
Assistant to the Chair of Materia Medica.

FRED. J. BECKER, M. D.,
Assistant to the Chair of Surgery.

RALPH W. HOMAN, M. D.,
Assistant to the Chair of Ophthalmology, etc.

ALPHEUS L. POLLARD, M. D.,
Assistant to the Chair of Obstetrics.

ADELE P. KIMBALL, M. D.,
Matron.

ELMER J. LAMBERT, M. D.,
House Surgeon.

LENORA JOHNSON, M. D.,
Clinical Assistant to the Chair of Surgery.

Additional Instructors from the Medical Department.

JOHN W. HARRIMAN, M. D.,
Professor of Anatomy.

JAMES R. GUTHRIE, A. M., M. D.,
Professor of Physiology.

ELBERT W. ROCKWOOD, B. S., M. D.,
Professor of Chemistry and Toxicology.

WALTER L. BIERRING, M. D.,
Professor of Normal and Pathological Histology.

LEE WALLACE DEAN, M. S., M. D.,
Demonstrator of Anatomy.

WILLIAM R. WHITEIS, M. S., M. D.,
Demonstrator of Normal Histology.

W. E. BARLOW, B. A.,
Demonstrator of Chemistry.

WILBER JOHN TEETERS, B. S., PH. C.,
Demonstrator of Chemistry.

GERSHOM H. HILL, A. B., M. D.,
(Superintendent of the Hospital for the Insane at Independence). Lecturer on Insanity.

EMLIN MCCLAIN, A. M., LL. D.,
Lecturer on Medical Jurisprudence.

Examiners.

P. E. TRIEM, M. D., Manchester.

A. S. HANSEN, M. D., Cedar Falls.

F. A. REMINGTON, M. D., Sioux City.

HOMOEOPATHIC MEDICAL DEPARTMENT.

The twenty-second annual course of instruction will open on Wednesday, September 14, 1898 and close on Tuesday, March 28, 1899. The opening lecture will be given by Professor Newberry, at 4 P. M., in the amphitheatre. The course of study extends over five years, one year being pre-matriculate, under a preceptor, and four years undergraduate. Men and women are admitted on equal terms, no distinction whatever being made between them. The large and well equipped laboratories in the University, the hospital facilities afforded by the union of the college and hospital under one roof, and the opportunity for collateral study in any department of literature or science, furnish facilities for securing an education in medicine not to be surpassed. A course has been authorized continuing over six years, which will enable the student to obtain the degree of B. S., in addition to the medical degree. See pages 33 and 34 of Catalogue.

Admission.

The requirements for admission are the same as in all the professional departments of the University, viz: the possession of a diploma from a high school approved by the University, or some equivalent, as the completion of the Freshman year in a college of letters of approved standing, with a sufficient knowledge of Latin. Failing in these requirements, the applicant for admission to the Freshman class must pass an examination in English scholarship, and Latin sufficient to admit to the Freshman class in the Collegiate Department. Applicants for admission to advanced standing must present evidence that they have attended one or more sessions in a reputable medical college and will be admitted to such class as they may prove themselves qualified to enter. All applicants for admission will apply to the

examining committee in the President's office, on Tuesday or Wednesday, September 13 or 14, 1898. If admitted, they will then report for enrollment and assignment of seats at the Registrar's office, Homœopathic Medical Building on Dubuque street. All fees must be paid to the Secretary of the University, *and to him only.*

Advancement to higher classes is secured only by examination, oral and written, combined with the quiz record and class standing. An average of 65 per cent must be secured in any one study to pass that chair; an average of 75 per cent in all the examinations is necessary to pass to a higher class, and to secure a degree. A failure to pass in two or more studies will stop advancement until the conditions are satisfied. A failure in one study will not stop advancement, but the student must pass a satisfactory examination in that study before the close of the year to which he is promoted. The Faculty reserves the right to determine the class which any student shall enter, in the case of applicants who have had one or more years in other medical schools.

Graduates of non-homœopathic medical colleges may be admitted as graduate students, as follows: If an *ad eundem* degree is sought they must matriculate in the University, pay a lecture fee and an examination fee and pass an examination in the therapeutics of the branches taught in this Department. If a degree is not sought, a matriculation fee is to be paid, and such laboratory expenses as may be necessary, together with a lecture fee, if a full course is taken.

Alumni of this school will be admitted to all lectures and clinics free of charge.

By order of the Board of Regents no student will be enrolled until all necessary fees have been paid.

In case any student is unable to pay the fees at the proper time, such student may, on application to the Dean of the Department, be granted an extension for a short time.

Students who do not pay the proper fees or avail themselves of the provision above mentioned, will be suspended from the Department until such fees are paid.

Tuition Fees.

The fee for tuition is sixty-five dollars ($65) for each year, of which forty dollars ($40) is payable on or before October 1st, and the remain-

der on or before January 10th. There are no extra fees whatever, but for each laboratory course in chemistry, there is required a deposit of $3, to cover breakage, and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student.

The above statement of fees is now in effect, and will apply to all students in the Department, irrespective of the date of matriculation.

Anatomy.

Anatomy is studied during the Freshman, Sophomore and Junior years. Regional anatomy will be taught in a short course of lectures in the Junior year. The course is a very thorough one, utilizing all the modern aids to teaching. Whenever possible the student will have the opportunity, by actual inspection of material, to become familiar with the appearance, texture and physical characters of all structures. Practical anatomy, or dissection, is absolutely essential to promotion to higher classes, and is most thoroughly taught, the supply of material being abundant. Each student is required to make two dissections, each year. On the completion of a dissection, a rigid examination will be held, which will entitle to a certificate to that effect. Without such evidence of having made two dissections, in a manner satisfactory to the Demonstrator, a student cannot be examined for graduation. Text-book: Gray, Nancredes' Essentials.

Physiology.

Physiology is studied in the Freshman and Sophomore years. In this subject the inductive method is very largely employed in imparting instruction. The lectures are profusely illustrated by means of charts, diagrams, and black-board figures; and the student is rendered practically familiar with the phenomena of the most important bodily functions in normal operation by the employment of experiments upon living animals as a means of demonstration. Text-books: Flint, Dalton, or Foster.

Histology.

The work in this department runs through the Freshman year. One lecture a week will be given, many of them being illustrated by means

of the stereopticon. Two hours each week are devoted to laboratory work in the new histological laboratory, which is commodious, well-lighted and supplied with thirty-six new compound microscopes, with all necessary accessories, dissecting microscopes, microtomes of various kinds, injecting apparatus, turn-tables, etc.

Each student is furnished a microscope, reagents and apparatus, is taught the use of the microscope, and does, or has demonstrated before him, the general technique of the subject of histology, hardening, embedding, sectioning, staining, mounting, etc.

Histological injections are made before the class. During the term the student prepares for himself a series of slides, illustrating the ultimate distribution of the blood, and cellular structure of normal tissues and organs. Klein's Manual of Histology is the text-book used.

Chemistry.

The work in chemistry is carried on during three years. In the Freshman year the course consists of lectures in general chemistry and laboratory work. The lectures treat first of the general principles of the science; then the subjects of interest to the student of medicine are discussed. Especial attention is paid to the compounds found in the body, with their functions and chemical changes. Medicinal and poisonous substances and such as are used in practical work are also considered.

In the laboratory the student begins with tests for the metals, particularly the poisonous ones, and passes to the analysis of complex substances. He learns methods of manipulation, and becomes acquainted with the properties and actions of reagents. In the latter part of the course urine is studied; quantitative and qualitative tests are made for its pathological constituents, and such normal ones as are of importance to the physician.

The course includes the methods for the sanitary examination of water, and those employed in quantitative analysis.

In the Sophomore year physiological chemistry is taken up on the same general plan. The lectures are in explanation and amplification of the laboratory work. The latter includes the study of the proximate principles of the body, and of their chemical changes. Artificial

digestive experiments are made, their products being isolated and tested. The constituents of the blood are tested, together with the methods for identification of stains. The qualitative tests for the abnormal constituents of the urine follow, and the quantitative determination of such as are of importance. The course is completed by the identification of urinary sediments and calculi, and the analysis of various pathological specimens of urine.

In the Junior year toxicology is taken up. Instruction in this branch is given by means of weekly lectures, supplemented by quizzes. The general principles are first considered, then the most important of the poisons are treated separately. Text-books: Simon, or Roscoe and Schorlemmer, Andrews' Analytical Chemistry.

Theory and Practice.

Regular attendance on this branch of medical study will be required only of the Junior and Senior classes; but it is desirable that the Sophomore class attend the lectures as often as their other duties will permit. The teaching will be didactic and clinical.

General and special pathology will be taught according to the latest investigations into the etiology and nature of disease.

It will be the aim of the occupant of this chair to teach only that which has secured the sanction of competent observers, and which has been confirmed by abundant clinical experience.

In teaching the relation of drug pathogenesis to semieology the well established principles of homœopathic therapeutics will be closely and consistently followed.

Attendance upon clinics will be obligatory upon Seniors, Juniors and Sophomores, but optional with the Freshman class.

The lecture room being under the same roof with the hospital furnishes admirable opportunities for bed-side instruction.

The books recommended are: Dickinson's Theory and Practice, Arndt's System of Medicine, Raue's Special Pathology, Goodno's Practice; for reference, Pepper's Text-book of Theory and Practice of Medicine, Stevens's Manual of Pathology.

Ophthalmology and Otology.

During the Junior and Senior years instruction in diseases of the eye and ear are both didactic and clinical. Special stress is laid upon the diagnosis and treatment of those diseases which will most often present themselves in the work of the general practitioner. The didactic teaching is illustrated by models and drawings. The clinics are large and varied, opportunity being thus given to examine and treat the cases presented. Text-books: Norton, Buffum, Angell.

Laryngology and Rhinology.

Instruction is given in laryngology and rhinology to the Junior and Senior classes by weekly lectures and clinics. Students are assigned cases for treatment, and given ample opportunity to become expert in the use of the laryngoscope, rhinoscope and other instruments employed in the diagnosis and treatment of the various diseases. Text-books: Ivin or Brown.

Pædology.

Weekly lectures and recitations are given on diseases of children to the Junior and Senior classes. The subjects taken up are the diseases of infancy, as well as early childhood, and while largely treated by the didactic method, clinical demonstrations are used whenever possible Text-books: Tooker, Fisher.

Materia Medica.

Students receive instruction from this chair during the entire course. The Freshmen are given two lectures each week during the first half of the year. Ten lectures are given on the organon, and ten on institutes and pharmacology.

The Sophomores and Juniors are instructed together. Four hours each week are devoted to lectures, recitations, and quizzes. The vegetable remedies will be considered during the term 1898–99, with weekly quizzes on the minerals. A brief review of the toxicological and physiological effects of the drug will be given, then the most prominent and characteristic symptoms. These symptoms will be grouped as they have been found useful for therapeutic purposes. The

Seniors will be allowed to attend and review the lectures given the Juniors, and in addition will be given two hours each week. These two hours will be devoted entirely to practical work. Clinical cases will be presented for which each student will be required to prescribe. The remedies thus presented will be thoroughly studied and compared with others which are applicable to the various manifestations of the disease under consideration.

Text-books: Organon, Dewey's Essentials of Materia Medica, Farrington's Clinical Materia Medica, Dunham's Homœopathy and Science of Therapeutics and Allen's Hand-book of Materia Medica.

Surgery.

This study extends through the entire course. Minor surgery is taught during the Freshman year, including bandaging. In the Sophomore and Junior years surgical emergencies are taught, including such topics as anæsthesia, shock, hemorrhage, wounds, fractures and dislocations. In the Senior year surgical pathology, general and special, is thoroughly gone over. The method of instruction is a combination of the didactic and practical. The principal operations are made on the cadaver, and experimental work in the seminary will receive careful attention in the Senior year. Examinations are held in each class at the close of the year.*

The books recommended are: In the Freshman year, Sargent's or Martin's Minor Surgery; in the Sophomore and Junior years, Hamilton on Fractures and Dislocations; in the Senior year, Fisher and Macdonald's Text-book of Surgery, Gilchrist's Surgical Pathology, White and Martin's Genito-urinary Diseases, Adams' Text-book.

Gynecology.

This branch is divided between the chair of obstetrics and surgery. The study is pursued in the Senior year.

Medical diseases of women are considered by the chair of obstetrics during the last half of the term. The surgical diseases are treated during the year by the chair of surgery, by lectures, clinics. and demonstrations. The books recommended are Wood's Gynecology, Southwick's Practical Gynecology.

*Sophomores, Juniors, and Seniors are required to attend the clinics; Seniors are admitted to sub-clinics as detailed in sections.

Obstetrics.

This branch is taught in the Junior and Senior years. The plan of instruction in this subject will be the usual didactic method supplemented by demonstrations with wet and dry preparations, models and diagrams, together with clinical practice whenever possible. Two lectures a week are given, with occasional quizzes and recitations. The scheme is designed to carry the student forward, after thorough instruction in the anatomy of the pelvis and generative apparatus, through ovulation, menstruation, gestation, and normal labor. Use of the various instruments is taught on the manikin, and every care taken to thoroughly prepare the students for dealing with complications. Dystochia, and all forms of abnormal gestation and labor are given in the closing portion of the course. The central idea is to give the practical preference over the merely theoretical. The text-books recommended are: Guernsey, Leavitt, and Lusk; Grandin and Jarmen, Obstetric Surgery.

Pathology.

The west hall on the second floor of the Medical Building is now the pathological and bacteriological laboratory. Here are all the instruments necessary for the study and demonstration of pathological anatomy and pathological histology, also the apparatus usually found in a well equipped bacteriological laboratory, ample for the cultivation and demonstration of the germs of interest to medical men. Students not only see this work done, but make all ordinary cultivations and pure cultures themselves, and prepare slides of all the ordinary non-pathogenic and pathogenic microbes.

Three hours a week are devoted to the practical study of morbid anatomy. The work consists of laboratory exercises, the aim being to make this study as practical as possible, and to familiarize the student with the use of the microscope in diagnosis. Part of the time in the laboratory is devoted to the study of prepared specimens under the guidance of the instructor, and the remainder to the mounting of pathological specimens by the student himself. An abundance of material is furnished by the laboratory, and each student is allowed to keep as his own property all the sections prepared by him during

the term. Special attention is paid to the diagnosis of tumors, trichinæ, etc., microscopically, and the student learns easy and rapid methods of making preparations for such diagnosis. Two hours a week are used for lectures, supplementary as well as introductory to the laboratory work.

The course in this chair is pursued in the Sophomore and Junior years, the Junior year being devoted to laboratory work and bacteriology.

The text-books recommended are: Green, Dellafield and Pruden, or Ziegler. In bacteriology: Abbott, Macfarland, Crookshank.

Medical Jurisprudence, Insanity and Dentistry.

These subjects will be treated in short courses of lectures, given by appointment.

Classes in materia medica, practice, minor surgery, pharmacology, obstetrics, surgical emergencies, surgery, gynecology, eye and ear, and pædology meet in the lecture-room or amphitheatre of the Homœopathic Hospital, in which rooms also, all the clinics are held. Physiology, anatomy and insanity are taught in the amphitheatre of the Medical Department. Pathology, histology, chemistry and toxicology are taught in the appropriate laboratories. Medical jurisprudence is taught in the lecture-room of the Law Department.

Clinics.

The clinics of this department are open to students of all the classes, but the attendance is not obligatory in the Freshman year. All the clinics are full; in some of them the capacity of the Hospital has been severely taxed. The general arrangement and clinical system are as follows: The House Surgeon at the commencement of the term details three students from the Senior class as clinical assistants. One of these retires after one week's service, one after two weeks, and the remaining one after three weeks. One student a week is detailed thereafter, so that each Senior student has three consecutive weeks of clinical work. The duties are to assist at all clinics, and to attend to all dressings in the Hospital, under the supervision of the House Sur-

geon. This gives unusual facilities for practical instruction. In the medical and eye and ear clinics each member of the Senior class will be given repeated opportunities for examination of patients, and will be required to diagnose the disease and suggest method of treatment. The clinics are largely patronized, the number of cases and the variety being fully equal to the college clinics elsewhere. The clinics are held as follows:

Medical Clinic. Thursday afternoon, service of Professor DICKINSON.

Surgical Clinic. Saturday morning, service of Professor GILCHRIST.

Eye and Ear Clinic. Tuesday afternoon, service of Professor NEWBERRY.

Gynecological Clinic. Friday morning, service of Professor GILCHRIST.

Obstetrical Clinics. By appointment, service of Professor COGSWELL.

Sub-Clinics. The sub-clinics are held two or more times a week, to which sections of the Senior class are admitted, where opportunity is afforded all to make examinations in gynecological cases, and the use of various instruments of precision for purposes of diagnosis.

Medical and surgical treatment, and nursing are free for patients entering the general clinics. Board in the Hospital is furnished for $7.00 a week.

Correspondence with reference to admission to the clinics or Hospital should be had with the professor having charge of the particular clinic, or the Registrar of the Faculty. Arrangements can be made for the reception of a limited number of obstetrical cases, only between the 15th of September and the 15th of February.

DISPENSARY. In connection with the clinics a dispensary has recently been opened, where the clinical assistants, under the direction of the Faculty, prescribe for and visit out-patients, as well as attend such cases of obstetrics as apply. The dispensary is growing in patronage and influence, and has become a highly important and profitable portion of the work, affording at once material for the clinics, and giving practical instruction to the attendant.

TRAINING SCHOOL FOR NURSES.

A training school for nurses has been authorized by the Board of Regents, the complete course covering three years. The first year is devoted to preliminary studies fitting the pupil for the active work, that is, as nurses in the Hospital. Candidates for admission to the Training School must be not under twenty nor over thirty-five years of age, must have a common school education, and must present two letters of recommendation as to their capability, qualifications, and moral character. No other examination for admission will be required.

The first year, covering the preliminary work, begins and closes with the medical term of the University. A fee of five dollars will be charged, payable at the beginning of the term to the Registrar of the Faculty. The work of this year is entirely theoretical, consisting of lectures upon anatomy, physiology, special nursing in diseases of the eye, ear, nose, and throat, and on practical nursing. For cases of emergency and home-nursing, this course is especially desirable. Aside from their practical work, during the second year, the nurses will have one recitation each week, and during the third year special topics for essays will be arranged. Those who have completed the preliminary work at the beginning of the second year may be entered upon one months' probation in the Hospital, during which time they will receive board, lodging, and laundry, but no compensation. If they are found satisfactory, they shall at the end of the first month and during the remainder of the second year in addition to their living, as above, receive $8 a month for personal expenses, with a slight increase during the third year. This sum is not to be regarded as wages, the instruction given being in itself full compensation for all services rendered. Those who complete the three years' course shall receive a suitable certificate signed by the President and the Secretary of the University. The graduating exercises occur in connection with those of the Department. For further information address the Matron,

ADELE P. KIMBALL, M. D.

Board and Accommodations.

Good board can be obtained at from $3 to $5 a week. By associating in clubs, students may supply themselves with good accommodations at a material reduction from the customary prices.

Students will be furnished with all necessary information concerning rooms and boarding by applying to the Y. M. C. A. Information Bureau.

Requirements for Graduation.

To be admitted to the degree of Doctor of Medicine (M. D.) in this Department, the student must exhibit to the Dean evidence of having pursued the study of medicine for four years; must have attended four courses of lectures, of at least six months each, the last of which shall have been in this institution; and must be not less than twenty-one years of age.

Arrangements have recently been made with the Faculty of the Collegiate Department by which it will be possible for a student to complete the course in Science and the course in the Homœopathic Medical Department in six years, thereby obtaining the degrees of B. S. and M. D. This combined course is especially recommended to all students who intend to enter the profession of medicine.

Homœopathic Medical Alumni Association.

The Alumni Association held its eleventh annual meeting at the College Building, March 28, 1898, at which time the following officers were elected:

President—A. G. HANSEN, Cedar Falls.

First Vice-President—F. C. SKINNER, Port Byron, Ill.

Second Vice-President—A. L. POLLARD, Iowa City.

Secretary—E. J. LAMBERT, Ottumwa.

Treasurer—LEORA JOHNSON, Iowa City.

Executive Committee—PRESIDENT, SECRETARY AND TREASURER.

Alumni are urged to send their names to the Secretary, to be enrolled as members. A small admission fee is required, the funds so procured to be donated to the Hospital according to a vote taken at the last meeting. Alumni are requested to keep the Secretary informed of change of address.

Johnson County Homœopathic Medical Society.

The meetings of this society are held weekly in the lecture-room of the Department, and have been very useful adjuncts to the instruction given. Senior students are associate members, and enjoy all the privileges of membership, except that of voting and the right to hold office. Officers for 1898-99:

President—JAMES G. GILCHRIST, A. M., M. D.
Vice-President—R. W. HOMAN, M. D.
Secretary—ALPHEUS L. POLLARD, M. D.

Any further information may be obtained by addressing the President of the University, the Dean or Registrar of the Homœopathic Medical Faculty, at Iowa City, Iowa.

Dental Department.

Faculty.

CHARLES ASHMEAD SCHAEFFER, A. M., PH. D., LL. D.,
President.

FRANK THOMAS BREENE, M. D., D. D. S.,
Professor of Operative Dentistry and Therapeutics, and Superintendent of Operative Clinics.

WILLIAM S. HOSFORD, A. B., D. D. S.,
Professor of Prosthetic Dentistry and Crown and Bridge Work, Superintendent of Prosthetic Clinics and Dean of the Faculty.

WILLIAM HARPER DEFORD, A. M., M. D., D. D. S.,
Professor of Oral Pathology and Hygiene.

Other Instructors and Officers.

ELBERT WILLIAM ROCKWOOD, B. S., M. D.,
Professor of Chemistry and Metallurgy.

WALTER LAWRENCE BIERRING, M. D.,
Professor of Pathology, Bacteriology and Histology.

CHARLES SUMNER CHASE, A. M., M. D.,
Professor of Materia Medica and Therapeutics.

JAMES RENWICK GUTHRIE, M. D.,
Professor of Physiology.

JOHN WALTER HARRIMAN, M. D.,
Professor of Anatomy.

WILLIAM ROBERT WHITRIS, M. S., M. D.,
Assistant Professor of Histology.

JAMES E. FLEENER, D. D. S.,
Lecturer on Orthodontia.

CHARLES CLEVELAND NUTTING, A. M.,
Lecturer on Comparative Odontography.

ROYAL WINTHROP BALDWIN, D. D. S.,
Lecturer on Regional Anatomy and Clinical Demonstrator.

A. E. ROGERS, D. D. S.,
Lecturer on Dental Anatomy and Clinical Demonstrator.

W. G. CLARK, D. D. S.,
Demonstrator of Porcelain Work.

CHARLES B. LEWIS, D. D. S.,
Demonstrator of Dental Technology.

FRANK B. JAMES, D. D. S.
Demonstrator of Dental Technology.

WILLIAM EDWARD BARLOW, B. A.,
Demonstrator of Chemistry.

WILBER JOHN TEETERS, B. S., Ph. C.,
Demonstrator of Chemistry.

E. A. SPRAKER,
Custodian.

HELEN BASCHNAGEL,
Clerk.

Visiting Clinical Instructors.

T. L. JAMES, D. D. S., Fairfield.

C. J. PETERSON, D. D. S., Dubuque.

A. R. BEGUN, D. D. S., Des Moines.

C. A. COPE, D. D. S., Onawa.

K. M. FULLERTON, D. D. S., Cedar Falls.

S. C. HATCH, D. D. S., Sioux City.

GUY HUNTLEY, D. D. S., Mason City.

C. A. PALMER, D. D. S., Grinnell.

C. R. BAKER, D. D. S., Davenport.

DENTAL DEPARTMENT.

Instruction in this school is given throughout the academic year by lectures, recitations; clinical teaching, and practical exercises, uniformly distributed. The course of instruction is progressive and extends over three years.

Some of the studies of the first and second years are pursued in connection with the classes in the Medical Department, the student receiving instruction by the same professors, at the same time and place with the medical students, and at the end of the year passing with them the examinations.

It is the object of the Faculty to present a complete course of instruction in theory and practice of Dentistry; and for this purpose well-appointed laboratories and infirmaries are provided, and such arrangements made as insure an ample supply of patients. Clinical instruction is given by the professors and other instructors, and under the direction of demonstrators patients are assigned to the students, insuring to all opportunity of operating at the chair, and becoming by actual practice familiar with all the operations demanded of the dentist.

The infirmaries remain open and clinical instructors and demonstrators are in attendance daily throughout the school year, offering to students unsurpassed facilities for acquiring practical knowledge and manipulative dexterity.

Course of Instruction.

The course of instruction extends over three years of nine months each. This, however, does not apply to those students who entered before the year 1896–97.

Requirements for Admission.

The applicant must present to the Faculty satisfactory evidence of good moral character, and must pass a preliminary examination or present a diploma or a certificate of graduation from a college, academy or high school, or a first class teachers' certificate covering the branches enumerated below under preliminary examinations. Students of both sexes are admitted on equal terms and are afforded the same facilities for acquiring a thorough dental education.

Preliminary Examinations. All students who intend to matriculate in the Department are expected to be present at the time appointed for examination. The preliminary examination will begin on Tuesday, the day preceding the opening of the session, at 8 A. M., and will embrace the following branches: Algebra, through quadratics, three terms; rhetoric and composition, three terms; English Literature, three terms; United States History, three terms.

The student may, at the option of the Faculty, substitute any one of the following electives in lieu of one of the preceding studies: Three terms of algebra, through quadratics; three terms of geometry, plane and solid; two terms of physiology; two terms of physical geography; one term of botany, with analysis of forty plants; three terms of general history; three terms of physics; three terms of English literature; two terms of civil government; two terms of history of England; three terms of American literature; three terms of chemistry; one term of commercial arithmetic; two terms of astronomy; two terms of geology; two terms of natural history; one term of political science; two terms of drawing; three terms of German; three terms of Greek; three terms of Latin reading, Cæsar; three terms of Cicero, four orations; three terms of Vergil, six books; one term of book-keeping; three terms of French; three terms of manual training.

Schedule of Studies.

First or Freshman Year. Completed the first year: Chemistry, including laboratory, Organic Materia Medica, Histology, including laboratory work. Comparative Anatomy, with Dissection, Dental Anatomy with Technic, and Operative Technic.

Subjects taken the first year and continued through the second year: Anatomy, Physiology, Dental Technology, lectures and laboratory work, and Operative Technic.

Second or Junior Year. Subjects completed the second year: Anatomy with Dissection, Physiology, Organic Chemistry, and Metallurgy, including laboratory, Inorganic Materia Medica and Therapeutics, Dental Technology, and laboratory work.

Subjects taken the second and continued through the third year: Surgery, Pathology, Therapeutics, Orthodontia Technic, Operative Technic, Operative Dentistry, and Prosthetic Dentistry.

Third or Senior Year. Subjects completed the third year: Oral Surgery, Pathology, Regional Anatomy, Special Histology, Clinical Dentistry, Therapeutics, Metallurgy and laboratory work, Dental Art, Special Therapeutics, Practical Bacteriology, Operative Dentistry, Prosthetic Dentistry, Dental Pathology, and Hygiene.

All students of the first and second years will be required to pass an examination on the studies pursued in their respective courses before leaving the University at the close of each term. No student who has failed in two of the studies of his course will pass to advanced standing unless they are made up before the holiday vacation. No certificates are given to any who fail in more than two branches, except a time certificate stating the actual time of attendance.

COURSE OF LECTURES AND LABORATORY WORK.

Operative Dentistry and Therapeutics.

To arrest decay and prevent the destruction of human teeth is the ideal work of operative dentistry. To know how to fill teeth well and lastingly is the ambitious desire of every intelligent student of dentistry. In the lectures delivered on this subject he will be made acquainted with all the useful materials and methods of filling teeth, the use of instruments, and the various manipulations required in a full practice at the operating chair. The same will be fully illustrated and demonstrated by numerous clinics, which will constitute an

important feature of the dental instruction. The student is expected to supply himself with such instruments as will enable him to perform all the usual operations of dentistry, under the supervision of the demonstrators. Students who own a dental engine should bring it with them. The application of remedies to diseased conditions is taught practically every day upon the patients in the operative clinic.

Clinical Dentistry.

In clinical dentistry thorough practical instruction is given in the details of operation, use of materials, instruments, appliances and the application of remedial agents for the restoration of diseased conditions. The students are required to take charge of patients and perform operations under the supervision of demonstrators. The large number of clinical patients presenting themselves furnishes ample opportunity for a variety of practical work.

Prosthetic Dentistry.

The instruction in this subject is both didactic and practical. It is the aim to teach not only the mere mechanical processes of Dentistry, but that combination of art with mechanism which enables the practitioner to effect so much in restoring the symmetry of the face and usefulness of the teeth where they have been lost or impaired by accident or disease. Thorough instruction is also given in methods of restoring the dental organs with crowns of metal, or porcelain, by bridges, and by the making of artificial dentures with bases of metal, rubber, celluloid, aluminum, gold and porcelain, either alone or in combination.

General Pathology and Bacteriology.

Pathology and bacteriology are taught during the Junior and Senior years by means of lectures and laboratory work. The work in the Junior year is devoted to general pathology, comprising a study of the general pathological changes, such as circulatory disturbances, degenerations, and inflammations, that occur in human tissues. During the Senior year the work consists of special pathology and bacteriology. It includes the study of forms of new growths and the

disease changes occurring in special structures, especially the oral tissues and such changes as come within the sphere of dental surgery.

The bacteriological laboratory is equipped with the most improved apparatus for bacteriological investigation. The work comprises the study of the characteristics of micro-organisms of the buccal cavity and their relation to dental caries and other disease processes. The slides prepared become the property of the student.

Histology.

Histology is taught during the Freshman and Junior years by means of lectures and laboratory work. The laboratory work comprises the preparing and study of microscopical slides, showing the minute structure of the different tissues and organs of the human body, with special reference to the digestive apparatus. Instruction is given in the various methods of preparing and staining tissues for microscopical examination, the slides prepared becoming the personal property of the student. During the Junior year the work is continued in the form of special dental histology, which is presented by means of didactic lectures and laboratory work. In the laboratory, each student prepares and studies a collection of slides pertaining to the histology of all the dental tissues and softer structures of the buccal cavity, including a complete series showing the development of the teeth, the slides becoming the property of the student.

Oral Pathology.

A brief consideration of inflammation and its terminations, pathological conditions incident to first dentition, pathological conditions incident to second dentition, dental caries—various theories and experiments by which conclusions are reached, individual diseases of the teeth,—sensitive dentine, hyperæmia, congestion and inflammation of the pulp, pulp nodules, putrescent pulps, alveolar abscess, acute and chronic, diseases of the peridental membrane, perecementitis, gingivitis, pyorrhœa alveolaris, the tongue and the mouth in diseases of remote parts, of tumors, methods of diagnosis. The epulic tumors, osteoma, simple cystic tumors, dentigerous cysts, diseases of

the antrum, ranula, mouth breathing, alveolar necrosis, maxillary necrosis, phosphor-necrosis, epitheleoma, syphilis, mouth manifestations, especially neuralgia and many other practical subjects that can not be mentioned here.

Hygiene.

The importance of this subject cannot be overestimated when it is understood that decay of the teeth, suppuration of the pulp, alveolar dental abscess, pyorrhœa alveolaris, and perhaps other diseases with which dentists have to contend are the direct result of unhygienic conditions in the oral cavities. The processes of fermentation, suppuration, and infection in general, are considered, and full instruction given in oral, personal, and office hygiene, and in the best methods of disinfection and antisepsis, including the care of the instruments in daily use.

Chemistry.

The work in chemistry is carried on during two years. In the Freshman year the lectures treat first of the general principles of the science, then their application to the needs and operations of dentistry are explained. The laboratory work of this year is chiefly in qualitative analysis with a view to familiarizing the student with the action of reagents, with chemical manipulation and with the most important properties of the metals and their compounds. In the Junior year the lectures will be upon organic chemistry and metallurgy, and the laboratory work upon the properties of the metals, and also some of the more important methods of quantitative analysis.

Materia Medica.

Freshman Year. The Freshman class receives two lectures each week upon the preliminary matter leading to the detailed consideration of drugs proper and organic drugs in particular, inclusive of those of both vegetable and animal origin. The preliminary topics include definitions, classification, dosage, routes and modes of administration of remedies, prescription writing including incompatibilities, metric and common systems of weights and measures, etc. The second

division of the subject, viz., that of organic drugs, takes up their discussion in detail following a natural and helpful classification of same based upon the dominent action of a leading drug in each group or class to which such drugs may be assigned. Also the antagonistic and synergistic action of the drugs are considered in their appropriate places and order. Quizzes, recitations, and written tests are given frequently to aid the student's memory. At the close of the session a review and session-test will be given.

Junior Year. The Junior class completes Inorganic Materia Medica prior to the holiday vacation and reviews the entire subject preparatory to passing the same before the close of the sessional year. After the holidays the class begins general therapeutics, special stress being laid upon those topics that appertain chiefly to dentistry, such as anæsthetics, general and local; coagulants, mineral and vegetable; pain obtunders, sedatives, narcotics, etc. Also such drugs as are comprised in the list of antiseptics, disinfectants, germicides, deodorants, epispostics, escharotics, etc., are specially considered. The consideration of a few of the more prominent and common dental affections, such as abscess of the antrum, alveolar abscesses, pyorrhœa alveolaris, etc., will be briefly discussed from their therapeutic standpoint chiefly. At the close of the year an examination will be given upon this subject as well as that of Materia Medica.

Anatomy.

This is taught in the first and second years by lectures and recitations, one course in dissection being taken each year.

Physiology.

In this subject the inductive method is very largely employed in imparting instruction. The lectures are illustrated by means of charts diagrams, and blackboard figures, and the student is rendered practically familiar with the phenomena of the most important bodily functions of normal operation by the employment of experiments upon living animals as a means of demonstration.

Orthodontia.

Instruction in this branch is given by the use of large charts demonstrating appliances of practical cases together with special care as to preventive measures for the care of deciduous teeth, and corrective treatment during the eruption of the permanent teeth. The course consists also of the treatment of practical cases in the infirmary, the care of which is given to individual students, under the direction of demonstrators in charge, and is also used for class instructions.

Regional Anatomy.

The instruction in this subject is supplementary to the lectures on general anatomy, and includes a careful description of the bones, muscles, blood vessels, and nerves of the head and face, especially such as are intimately associated with the physiology and pathology of the dental organs. The lectures are illustrated by maps, charts, and models, and by several well prepared natural specimens of the head, jaws, teeth, and nerves *in situ*.

Comparative Odontography.

This course is of unusual practical value. The dental organs and their practical use, comprised in the various orders or families of the animal kingdom, are illustrated by natural specimens, lantern exhibitions, and dissection of the lower animals.

Dissection.

Early in the term students make application to the demonstrator of anatomy for places at the dissecting table. Each student is required to dissect at least one part. No charge is made for material.

Dental Anatomy.

This course is supplementary to the subject of general anatomy and in addition to the lectures given, each student prepares a series of sections of the natural teeth, making the prints of them in a book for that purpose. The books are the property of the student.

Porcelain Work.

The use of porcelain in the various applications to the practice of dentistry is taught, including crowns, bridges, artificial dentures, inlays, etc. Also the use of the various furnaces is demonstrated.

Operative and Prosthetic Technic.

This course consists of the tempering and making of instruments both for operative and prosthetic work, also the preparation of cavities in the natural teeth out of the mouth and filling of the same with the different filling materials. The course is thoroughly practical and constitutes a very important feature of the student's work preparatory to the clinical experience.

It is the desire of the Faculty that the dental profession will assist in the above course by forwarding to the department all the extracted teeth possible, express charges paid by the department.

Dental Museum and Library.

Members of the dental profession, dental students, and all persons interested, are invited to contribute to the museum such specimens of malformation, normal or diseased conditions, as will serve for illustration of dental teaching; also to the library any books, pamphlets, journals, or other reading matter pertaining to dental subjects. Such contributions will be duly labeled with the donor's name, and carefully preserved.

Laboratories and Clinic Rooms.

The didactic work is supplemented by practical teaching in the laboratory and clinic rooms, with an abundance of patients (6,928 last session.) The clinic rooms are equipped fully and completely, with Wilkerson and Columbia chairs, cabinets, and all necessary apparatus for the purpose, such as lathes, furnaces for porcelain work, rolling mills, vulcanizers, tables, microscopes, etc. Students are required to supply only the lighter and more portable instruments, the list of which will be furnished on application.

Requirements for Graduation for Session of 1898-99.

The candidate for graduation must be of legal age, and of good moral character; must present to the Faculty and Board of Examiners a satisfactory case of artificial dentistry; also the required clinical record of practical operations on the natural teeth; must sustain a satisfactory examination in the branches taught, and must prove his fitness for the practice of dentistry.

The time of study must include attendance on three courses of lectures, the last of which must be at this institution.

The deportment during the term must have been unexceptionable; and attendance upon all lectures, clinics and other instruction in the course must have been in accord with the requirements of the department.

Members of the Junior class must be examined finally in anatomy, physiology, organic chemistry, metallurgy and therapeutics.

Members of the Senior class must notify the Dean of the Faculty in writing during the second week of February of their intention of becoming applicants for the degree of Doctor of Dental Surgery, at the same time presenting a certificate from the Secretary of having paid all fees, with a certificate of legal age and good moral character.

Attendance on any course of lectures in other reputable dental colleges having similar requirements will be accepted as equivalent to a corresponding course in this department. Graduates of medical colleges will be required to attend two full years of instruction in practical dentistry in this institution, including the courses of lectures, before applying for graduation.

Having complied with the requirements of this department, the Faculty and Board of Examiners will recommend the candidate to the Board of Regents as entitled to receive the degree of Doctor of Dental Surgery.

Tuition.

The fee for tuition is $75 for each year, payable $50 on or before October 1, and $25 on or before January 10. There are no extra fees whatever, but a deposit of $3 must be made to cover breakage and loss before beginning work in the chemical laboratory.

The above statement of the fees is now in effect, and will be under-

stood to apply to all students in the department, entirely irrespective of the date of matriculation. All students who do not pay the proper fees or avail themselves of the provision above mentioned will be suspended from the department until such fees are paid.

It is of greater advantage to the student, during his dental course to study and review a single text-book in each department than to read several cursorily. It is, therefore, advised that a single work in each department recommended below be chosen and carefully studied while any others may be used for reference and subsequent perusal.

PRACTITIONERS' COURSE.

This course is planned for the convenience and benefit of practitioners. It will be optional with those entering the course as to what studies they will pursue, and what methods in practical work they may take up.

The curriculum will be arranged more especially to give a thorough course in pulp and abscess treatment, and other pathological conditions of the oral cavity. In addition to this, detailed instruction will be given in bridge and crown work, continuous gum dentures, porcelain fillings, and in the methods of working metals by all the different operations which the practitioner is called upon to perform.

Requirements for Admission.

Anyone in reputable practice may enter this course. Those attending the full course of two months will be given a Practitioner's Certificate at the end of the course. Graduates of this department will be admitted on the payment of the matriculation fee only.

Graduates of other reputable dental schools will be admitted on payment of the matriculation fee and $10.

A full corps of demonstrators in all departments has been appointed to attend to the duties pertaining thereto. The service of several additional clinical instructors will be obtained during the session, each a specialist.

Fees for Practitioners' Course.

Matriculation fee	$ 5 00
Tickets, including certificates	25 00
Laboratory fee	6 00
	$36 00

DENTAL ASSISTANTS' COURSE.

A training school for dental assistants has been authorized by the Board of Regents. The course will extend through one year of nine months, beginning and ending with the regular dental term. The fee for tuition is $75 for the course, of which $50 is payable on or before October 1, and the balance on or before January 10. Candidates for admission to this course must possess a common school education, and must present two letters of recommendation as to their capabilities, qualifications and moral character. No other examination for admission will be required. Those completing the course will receive a suitable certificate properly signed, and attested by the seal of the University. This course will be both didactic and practical, thorough instruction being given in Operative and Prosthetic Technics, Therapeutics, Pathology and Dental Anatomy; there are also special lectures and work relative to the duties of an assistant both at the operating chair and in the laboratory.

Credits obtained in this course will be allowed to those desiring to attend and complete the regular dental course, providing the requirements are fulfilled as provided for the regular dental course.

Payment of Fees.

All fees must be paid promptly, when due, to the Secretary of the University, William J. Haddock. Students who do not pay the fees when due will be suspended from the department until payment has been made.

Board and Accommodations.

Board in Iowa City can be obtained for from $2.00 to $3.00 a week; rooms from $2.00 to $8.00 a month. Many students procure rooms, and board in clubs, which materially reduces the cost.

Text-Books and Books of Reference.

These can be obtained at the book-stores in Iowa City. Dealers give a discount of from ten to twenty per cent. The following are recommended by the Faculty:

Operative Dentistry: American Text-book of Operative Dentistry, Ottellungui, Flagg's Plastics.

Prosthetic Dentistry: Essig's Prosthetic Dentistry, Richardson's Mechanical Dentistry, Evan's Artificial Crown and Bridge Work; collateral reading of Harris's Principle and Practice, American System of Dentistry.

General Pathology: Green, Zeigler, Delafield, Prudden.

Bacteriology: Abbott, Crookshank, Frænkel.

Histology: Piersol, Schæfer, Stirling, Klein.

Oral Pathology and Hygiene: Greene, Garretson's Oral Surgery, Wilson on Hygiene.

Chemistry: General Chemistry—Wurtz, Bloxam, Witthaus; Qualitative Analysis—Thorpe, Crafts.

Materia Medica: White and Wilcox, Potter.

Therapeutics: H. C. Wood, Potter, Gorgas.

Anatomy: Gray (13th edition), Holden's Landmarks, Quain (10th edition), Holden's Osteology, McClellan's Regional Anatomy, Treve's Applied Anatomy.

Physiology: Foster, Landois and Stirling, Flint, Kirk.

Orthodontia: Angles, Guilford.

Dental Anatomy: Tomes, Black.

Comparative Anatomy: Howell.

Dictionaries: Harris, Dunglison, Thomas.

Notice.

The National Association of Dental Faculties, of which this department is a member, passed at their last meeting a rule whereby all students not regularly matriculated within ten days from the opening of any school will not receive credit for a full course.

The Dental Department of the State University of Iowa complies not only with the rules and conditions of the National Association of

Dental Faculties but also with those of the National Association of Dental Examiners.

Students should make their arrangements to be in attendance on the first day of the session, as the Faculty cannot adjust their plans to the tardy arrival of students by wasting time on unimportant lectures at the beginning. Promptness at the beginning of the term is very essential.

Members of the profession who receive the announcement are requested to notify the Secretary of any change in their address. They will also confer a favor by sending the names of other dentists practicing in the towns in which they reside. For further information apply to Wm. S. Hosford, Dean of the Dental Department, Iowa City, Iowa.

Department of Pharmacy.

Faculty.

CHARLES A. SCHAEFFER, A. M., Ph. D., LL. D.,
President.

EMIL LOUIS BOERNER, PH. G., PHAR. D.,
Professor of Pharmacy, Director of the Pharmaceutical Laboratory and Dean of the Faculty.

LAUNCELOT W. ANDREWS, PH. D.,
Professor of Chemistry and Director of the Chemical Laboratory.

THOMAS H. MACBRIDE, A. M., PH. D.,
Professor of Pharmacognosy and Director of the Microscopical Laboratory.

CHARLES S. CHASE, A. M., M. D.,
Professor of Materia Medica.

BOHUMIL SHIMEK, C. E.,
Professor of Botany.

E. W. ROCKWOOD, B. S., M. D.,
Lecturer on Toxicology.

PERCY H. WALKER, M. S.,
Instructor in Chemistry.

LESTER T. JACKSON, B. S.,
Assistant in Chemical Laboratory.

GEORGIA KNAPP, PH. G.,
Assistant in Pharmaceutical Laboratory.

ZADA M. COOPER, PH. G.,
Assistant in Pharmaceutical Laboratory.

DEPARTMENT OF PHARMACY.

The Department of Pharmacy of the State University of Iowa is designed to furnish pharmacists, and those desiring to engage in pharmacy, an opportunity to acquire a thorough practical education in the departments of science most intimately connected with the practice of that profession. A technical education, such as that offered by the schools of pharmacy, and seldom if ever acquired in drug stores, is as necessary to the accomplished pharmacist as is the special training of a medical course to the physician. The day is not far distant when the pharmacist who is not provided with the evidence of skill which the college diploma furnishes, will labor under equal disadvantages with the non-graduated physician of to-day.

The experience of the past thirteen years has thoroughly demonstrated the practicability of the courses in this Department. This is shown by the readiness with which students of even one session find and hold employment in drug stores, at salaries much higher than they could possibly command without the college training, and by the fact that a much larger percentage of students who have completed one year's work in this school pass the examinations before the State Board of Pharmacy, than of candidates who go before the Board from drug stores, even after several years' experience.

Incidentally, therefore, the courses are well calculated to aid those who desire specially to qualify for the examinations of the State Board of Pharmacy.

It is the aim of the Faculty to make the courses so practical that students will find it not only professionally but also pecuniarily profitable to spend a season or two in the Department.

Sec. 2589 of the Code, relating to the registration of pharmacists, was amended by the Legislature on March 26th, 1898, to read as follows:

Sec. 2589. Examinations–registration. The commission, at such times and places as it may select, and in such manner as it may determine upon, shall examine all persons desiring to engage in and conduct business as registered pharmacists, as contemplated in the preceding section, and, if found competent, the applicant's name shall be entered in the registry book of certificate holders. Graduates of pharmacy holding a diploma from the State University, or from any school or college of pharmacy requiring a course of study and laboratory work equivalent to that prescribed by the said University in its catalogue for the school year 1897–98, shall be entitled to registration as pharmacists without examination. Pharmacists thus registered have the sole right to keep and sell all medicines and poisons except intoxicating liquors.

The fourteenth annual course of lectures will begin on Wednesday, September 14, 1898, and close on Wednesday, March 29, 1899. There will be a vacation commencing December 22, 1898, and ending January 4, 1899.

Building.

This school is comfortably located in a three-story building, erected at a cost of about fifty thousand dollars, and furnishing about twenty-five thousand square feet of floor space, perhaps the largest accommodations in the way of room enjoyed by any school of pharmacy in this country. The equipment of this building is of the most modern, and in keeping with the advancing stage of the science. Through liberal appropriations periodically made by the Legislature and the Board of Regents, the accumulated equipment of some years is being constantly enlarged, and affords excellent facilities for instruction. The lecture-rooms are provided with all desirable conveniences for class demonstration, and with large tablet chairs. The laboratories are especially roomy, the chemical and pharmaceutical laboratories occupying each a floor space of 54x140 feet, divided into two large general and a number of smaller special laboratories. Two forty-horse power boilers supply the steam for all purposes, and a seven-horse power gas engine furnishes the power for drug mill, dynamo, etc.

Preliminary Examination.

Every applicant for admission to the Junior class will be required to pass a preliminary examination in English, penmanship, geography, and arithmetic, or give satisfactory evidence of having completed such studies in a grammar school.

Admission to the Senior class will be by examination in the branches of study taught during the Junior year. Students presenting evidence of having passed the Junior examination in another recognized college or school of pharmacy will be admitted without further examination.

Courses of Instruction.

The courses of instruction embrace lectures on pharmacy, materia medica, pharmacognosy, botany, chemistry, and toxicology, with practical work in pharmaceutical, microscopical, and chemical laboratories, and almost daily recitations during the term.

About two hundred and twenty-five lectures are delivered annually to each of the Junior and Senior classes and more than four hundred hours are devoted by each student to practical work in the several laboratories, and to recitations.

Following the precedent established some years ago by some of the older colleges of pharmacy, the graded course is adopted. The full course extends over two years, and the students are divided into Junior and Senior classes, composed of first and second course students, respectively. This arrangement, while adding greatly to the labors of the Faculty, proves of great benefit to students, by enabling the professors not only to introduce new and profitable subjects in their departments, but by extending their lectures over two sessions, to take up the elementary work during the first, and the more advanced during the second year.

Pharmacy.

PROFESSOR BOERNER.

The introductory lectures to the Junior class will embrace a short review of the pharmacopœias of the United States, England, France,

and Germany; the various systems and appliances of weights and measures in use by the leading nations; the apparatus and methods necessary for the determination of the specific gravity of solids and liquids, and the sources and management of heat for pharmaceutical purposes. These will be followed by descriptions and illustrations of apparatus necessary to conduct properly the processes of percolation, filtration, comminution, sifting, solution, precipitation, neutralization, evaporation, distillation, sublimation, etc.

The official drugs will be considered by groups, the classification being based upon the more prominent proximate constituents contained in the drugs under consideration, beginning with those substances containing prominently lignin, and passing in order to those containing starches, sugars, gums, resins, oleo-resins, fixed oils, volatile oils, alkaloids, glucosides, neutral principles, etc.

All the preparations of a drug will be considered together. To aid the student in memorizing the strength of official preparations, these will be considered by pharmacopœial classifications.

The lectures to the Senior class will begin with a short review of the subjects embraced in the Junior course, followed by a critical study of the preparations of the United States Pharmacopœia, classified according to the character of their active or medicinal constituents. The relation they sustain to each other will be considered, and whenever practicable, the methods of their preparation will be demonstrated, the aim being to apply the theories and general principles taught in the Junior course.

The concluding lectures of the course will be devoted to extemporaneous pharmacy—such as the preparation of emulsions, pills, suppositories, solutions, ointments, etc., and the dispensing of physicians' prescriptions, the preparation of toilet articles and perfumery, etc.

The adulteration and sophistication to which official preparations are subject, and the methods for their detection will be noticed to the extent which their importance may demand.

Chemistry.

PROFESSOR ANDREWS.

The laboratory work will be divided into two distinct courses, both of which are requisite for graduation, but only one of which can be taken by the student during either of the two college years.

Junior Year. The Junior year comprises instruction in the general principles of chemistry, and in qualitative analysis, arranged with special reference to pharmaceutical preparations.

The lectures elucidate the fundamental laws of the science, demonstrating them, whenever possible, by numerous experiments performed before the class. The chief metallic and non-metallic elements, with their more important compounds and reactions are considered. The practical application of the principles of chemical calculation, by which the compositions of compounds may be deduced from their formulas, in consequence of its great importance to the pharmacist, is carefully inculcated. Instruction in details of the work, and in matters of manipulation is conveyed in the laboratory course, which occupies, on an average, seven hours a week. Here the student is taught by a systematically arranged series of experiments the properties of the commonest chemical agents, and how to handle chemical apparatus properly. When some manipulative skill is attained, qualitative analysis is taken up. The characteristic reactions of bodies as applied to their detection in mixtures are made familiar in a series of examples, beginning with the simplest substances, and passing gradually to the more complex, such as are met with in the practice of Pharmacy. The student is expected at the conclusion of this course to be able to test the purity of official preparations and to detect the nature of any adulteration which may be present. He is required to pass a practical examination covering this ground.

Senior Year. Quantitative analysis is taken up, particular emphasis being laid upon volumetric processes, as these, by virtue of the ease and rapidity with which they are executed, are of the greatest general usefulness.

The chemical reactions used for detecting morphine, strychnine and other ackaloidal and coal tar products of pharmaceutical importance

are studied in the laboratory and the class is exercised in the practical analysis of mixtures of such substances.

Practice is given in the valuation of numerous inorganic and organic pharmaceutical preparations, and in the methods of controlling or determining their exact strength. A laboratory examination concludes the course.

Pharmacognosy.

PROFESSOR MACBRIDE.

This course is intended to present the organic Materia Medica from the standpoint of the biologist, with a view to enabling the student to handle his materials intelligently, and to identify them in accordance with the recognized principles of biologic science. The various drugs of organic origin are taken up in the order of their natural classification, the principal facts as to their nature, origin and preparation are set forth in a series of lectures illustrated by abundant material in original packages, as well as by herbarium specimens (in the case of plants), charts, drawings, microscopic preparations, etc.

Winter. One hour a week, commencing about November 1.

Ample cabinets of Materia Medica are at hand, and free use is constantly made of the magnificent collections now found in the Herbarium of the State University.

Text-books:

Flueckiger's Principles of Pharmacognosy.

Maisch's Materia Medica.

Bentley and Trimen's Medicinal Plants.

Millspaugh's American Medicinal Plants.

The United States Dispensatory.

The National Dispensatory.

Botany.

PROFESSOR SHIMEK.

Three courses are offered in Botany:

Course 1. General Botany. This course is devoted to a careful study of the elements of the science. The various organs of the plant

are reviewed and the local autumnal flora is made to afford abundant material to illustrate, in the hands of the student, the morphology of roots, stems, and leaves, as well as the ordinary principles of floral analysis, and the means of specific identification. Types of the principle orders of greatest economic value are studied in detail.

Junior Year. Fall term. Two hours a day for the first six weeks.

Course 2. The second course is devoted to an inquiry into the life and growth of the plant; the cell, its morphology and products; the morphology of the entire plant structure as a means of identification. It includes laboratory work with the microscope and evening lectures illustrated by numerous stereopticon views.

Junior Year. One hour a week during fall and winter terms, following Course 1.

Course 3. Microscopic Technology. This course includes instruction in the use of the compound microscope, and its employment in the investigation of vegetable structures. The student is supplied with an instrument and all necessary reagents and apparatus, and is taught the various modes of cutting, staining, and mounting histological preparations. Practical instruction is given in the use of the microscope in the identification of crude drugs as well as in the detection of adulteration. Each student taking this course prepares at the laboratory for his own use, a cabinet of microscopic slides, illustrative of many of the more important official drugs.

Senior Year. Winter term. Two hours a week.

Students in all these courses are afforded ample laboratory facilities, and the splendid botanical collections in the University Herbarium are always available for illustrations and comparative study.

The following list includes the principal text-books:

Macbride's Lessons in Elementary Botany.

Wood's Class Book of Botany.

Gray's Manual of Botany.

Goodale's Physiological Botany.

Materia Medica.

PROFESSOR CHASE.

This branch will be presented to the students of the Pharmacy Department from a two-fold standpoint, namely, that of extemporaneous pharmacy and the prescribing physician. To this end a brief outline course in physiology illustrative of the functions of the more prominent organs of the body will precede the discussion in detail of the subject matter that more properly belongs to this chair. However, the professor in charge feels that the pharmacist can best serve those who seek his aid by having a general apprehension of a few of the salient points at least that belong chiefly to the physiologist.

Junior Year. The members of the Junior class will be given preliminary definitions of the subject; also various terms such as alkaloids, glucosides, leucomaines, ptomaines, gums, resins, etc., etc. Also the various official preparations will be defined and discussed. The routes and modes of administration of remedies, their physiological and toxicological action will likewise be considered. The origin, source, composition, chemical characteristics and physical properties, the modes of preparations, etc., of each drug will be noted briefly, their more elaborate consideration being referred to the chair of Pharmacognosy.

The subject of prescription writing including incompatibles and their classifications, their instantaneous detection and means of avoidance will be subjects for careful consideration and drill. Cumulative action of drugs in the system — how it may occur and how avoided — will also be discussed. The common and metric systems of weights and measures will receive due attention. Finally with subject of dosage considered at length, the student will be assumed to be ready to be introduced formally to the chief drugs made use of in his profession. To this end organic drugs of both vegetable and animal origin will be first considered. The student will be required to make full and exhaustive notes on each lecture at the time of its delivery, and also present a carefully prepared transcription of the textual matter found in the text-book used. A very excellent and natural grouping of drugs considered will be followed, based upon the dominant action of

the leading drug of the group or class to which such drugs may be assigned. In this manner systematic study is preserved and the subject matter much more easily retained. Frequent quizzing, recitations and written tests supplement the student's part of the work, thereby facilitating the retention of the facts presented.

Senior Year. This course is an amplification of the preceding. The Senior class is given a rapid review of the subject-matter of the Junior course and then completes the unfinished portion of this part of his work. A brief course in Inorganic Materia Medica is likewise presented to the members of this class, comprising the more important drugs made use of in pharmacy. With frequent reviews, tests, drills, etc., this class will, before the termination of the session, complete the subject, review and pass it. Prescription writing will be dwelt upon in this course as in the preceding year so as to make sight reading and detection of errors possible. The physiological action of drugs is also specially presented, antagonistic and synergistic remedies being noted. Thus with a review of the entire subject, this class is led to a general comprehension of the fundamental principles and knowledge of the leading drugs used in this important branch of their course.

Toxicology.

PROFESSOR ROCKWOOD.

The course consists of one lecture a week during the entire session. The general action of poisons is first considered, then the most important ones are treated separately. Their physical properties and chemical action are noticed, together with their uses, and most common sources as toxicological agents. The symptoms of the different classes are given, and the treatment for each. Especial attention is paid to antidotes. Methods of testing suspicious substances, as well as the examination of secretions and excretions, are explained and illustrated by experiments.

Pharmaceutical Laboratory.

The pharmaceutical laboratory, provided with the necessary conveniences, apparatus, and material for thorough practical instruction

will be open daily during the greater part of the school year. The instruction will embrace practice in the use of thermometers, hydrometers, specific gravity bottles, and balances; the preparation of tinctures, syrups, oleo-resins, solid and fluid extracts, pill masses, compound powders, solutions, hypodermic and compressed tablets, and many chemicals, such as the official iron solutions, scale salts of iron, mercury and lead compounds, which the apothecary should and can prepare for himself, both with advantage and profit; extemporaneous pharmacy, including the preparation of emulsions, pills, plasters, suppositories, prescriptions, the application of pharmacopœial tests, the manufacture of handkerchief extracts, colognes, sachet powders, etc.; in short, practice in all the varied duties of a first-class pharmacy. The greatly improved facilities of the laboratory building will permit of the introduction of work found impracticable for preceding classes.

Instruction in this branch is now looked upon as one of the utmost importance in pharmaceutical education, especially as much of the work formerly conducted entirely by the apothecary is now in the hands of large manufacturing establishments, and the student in pharmacy is thereby deprived of many valuable opportunities for gaining the necessary experience and self-confidence in drug stores, which a personal acquaintance with the various manipulations is sure to bring about. The instruction in this laboratory will be individual; the progress made will therefore depend upon the student's knowledge and exertions.

All students desiring to graduate from this school are required to pursue this course during the Junior and Senior years.

Students will be furnished with all necessary apparatus and material, but will be required to pay for all breakage or damage to apparatus while in their possession.

Tuition.

The fee for tuition is $75 for each year, of which $50 is payable on or before October 1, and the remainder on or before January 10. There are no extra fees whatever, but for each laboratory course in chemistry or practical pharmacy there is required a deposit of $3 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the

student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement of fees is now in effect, and will be understood to apply to all students in the Department, entirely irrespective of the date of matriculation.

All fees must be paid to the Secretary of the University, William J. Haddock.

All students who are delinquent in the payment of tuition will be suspended from the Department until the tuition is paid.

Qualifications for Graduation.

Every person upon whom the diploma of this Department is conferred must be of good moral character, have arrived at the age of twenty-one years, have attended two full courses of lectures, the last one of which shall have been in this school, including two full courses of pharmaceutical, microscopical, and chemical laboratory practice, and shall pass satisfactory written examinations in all the branches taught in this school, when he shall be entitled to the degree of Graduate in Pharmacy (Ph. G.).

Final Examinations.

The examinations of candidates for graduation will take place during the week preceding the close of the lecture season.

Weekly Examinations.

As auxiliary to the lectures, the professors will hold frequent quizzes in their respective departments, to serve as reviews of the subjects discussed in the lectures.

Text-Books.

Pharmacy—For Juniors—U. S. Pharmacopœia, Remington's Practice of Pharmacy, National Formulary. For Seniors—All the above, Caspari's Treatise on Pharmacy, Coblentz' Handbook of Pharmacy, Scoville's Art of Compounding.

Chemistry—Andrews' Qualitative Analysis, Long's Experimental and Analytical Chemistry.

Pharmacognosy—Maisch's Organic Materia Medica.

Materia Medica—White & Wilcox's Materia Medica and Therapeutics, Sayre's Organic Materia Medica and Pharmacognosy, Culbreth's Materia Medica and Pharmacology.

Botany—Macbride's Lessons in Elementry Botany, Gray's or Wood's Manual, Bastin's College Botany.

Reference Books.

U. S. Dispensatory, National Dispensatory, Fresenius' Analytical Chemistry, Hoffman and Power's Examination of Medicinal Chemcals, Gray's Botanical Text-Book, Vol. II.

Board.

The cost of board in clubs is from $1.50 to $2.50 per week; in private houses from $2.50 to $4.00 per week. Rooms can be obtained at from 50 cents to $1.50 per week for each student.

Libraries.

The general library of the University is accessible to students of all departments during eight hours of every week-day. Books may also be drawn for outside use.

One hundred and thirty American and European periodicals are taken, and are kept upon the tables of the reading-room throughout the year.

For further particulars address Emil L. Boerner, Dean of the Department of Pharmacy, Iowa City, Iowa.

DEGREES CONFERRED JUNE, 1897.

COLLEGIATE DEPARTMENT.

Master of Arts.

Brock, Frank V., A. B.
Currier, Helen Noyes, Ph. B.
Crossley, J. J., A. B.
Harney, Helen M., Ph. B.
Kelly, Harry E., Ph. B.
Van Law, C. H., A. B.

Master of Science.

Radasch, Henry E., B. S.
O'Donoghue, J. H., A. B.

Bachelor of Arts.

Briggs, George N.
Bursma, Jacob
Hamann, Albert W.
Hanks, John
Hardman, James Elias
McCord, Robert Leigh, Jr.
Paisley, Albert A.
Pile, Mittie Mansfield
Popham, R. G.
Resser, Burt C.
Schaeffer, George Schuyler
Seymour, Libbie
Simmons, Edmund
Smith, Charles Samuel
Zerwekh, Florence A.

Bachelor of Philosophy.

Allin, Norra
Baker, Irving Wesley
Barker, Arthur J.
Beckman, F. W.
Bettenga, Everett P.
Bloom, Charles
Boals, Abby
Boesche, Louise A.
Brown, Ralph Othniel
Budrow, Lester R.

Churchill, D. B.
Crone, Reuben Bertram
Dorcas, Cora
Ensign, Forest C.
Foster, Charles Scott
Freeman, Mae Agnes
Gray, Maud
Grimes, Frank P.
Hanson, Harry Webster
Hobbs, Sam Warren
Horack, Frank Edward
Huebner, Charles F., Jr.
Hull, John Kress
Keeler, Wilfred Cecil
Kiser, Joseph Donald
LaForce, Frank E.
Larrabee, Frederic
Lynch, Charles Jeremiah
MacFarland, Beulah
MacFarland, Elena
Meissner, John
Moon, Edwin Griswold
Otto, Mary Laura
Petersberger, Isaac
Price, George M.
Reever, William Henry
Reynolds, John
Sayers, Samuel Jefferson
Sears, Charles William
Shephard, Hugh H.
Taylor, Kathryn May
Thomas, Benjamin Franklin
Van Metre, Margaret

Bachelor of Science.

Burge, Albertus J.
Clark, Whit H.
Crane, Ezra E.
Daly, William Joseph
Donohoe, Anthony P.
Ende, August
Finch, Grace Ellen
Gibbs, George Sabin, Jr.
Heck, Ernest William
Hetzel, Roy Boyd
Iverson, Iver, Jr.
Lorenz, Charles F.
Savage, Thomas Edmund
Yost, Charles Gitchell

Bachelor of Science in Civil Engineering.

Hewitt, Charles Edgar
Johnson, George Monroe
Schultze, J. Otto
Wilkin, Frank Stephenson

Bachelor of Science in Electrical Engineering.

Bailey, Arthur
Willis, Bernard Darwin

LAW DEPARTMENT.

Bachelor of Laws.

Alderman, Ulysses S.
Allen, Everet M., B. S.
Ashcraft, Adolphus M.
Ashcraft, Ida J.
Bates, Franklin F.
Beach, Arthur E.
Bouma, Milton S.
Brady, Thomas E.
Brockway, Earl B., A. B.
Brown, John J.
Bruce, Robert
Burling, Charles G., Ph. B.
Burrell, Walter C.
Camp, Curtis B.
Campbell, Joseph
Carroll, Edward J.
Colburn, Henry B.
Cooper, Paul F.
Corrigan, John L.
Crary, Elisha A., Jr., Ph. B.
Daniger, Henry M.
Devitt, James A.
Ditzen, Henry E. C., Ph. B.
Dorland, Henry H.
Edelstein, John F.
Evans, William T., Ph. B.
Everett, Fred D.
Ewing, Peter B.
Goeldner, Hugo F.
Graham, Tully E.
Graham, William A.
Groves, Mack J.
Haines, Robert M., Jr., A. B.
Halvorson, Gay
Hammill, John
Harriman, Fred A.
Holbrook, Carleton W., A. B.
Hoxie, Wirt P.
Keeler, Burr C.
Kehoe, John J.
Kingsbury, Charles S.
Kintzinger, John W.
Kirkland, Louis J.
Lattner, Samuel B.
Lewis, Edward O.
Lovrien, Fred C.
Lumm, Alfred W.
McCoy, John N., A. B.
McGarvey, William A.
Mack, Mansfield E.
Maine, Ernest K., A. B.
Mayer, Stephen G., A. B.
Mercer, Andrew W.
Miller, Justus A., B. S.
Mueller, Alfred C.
Mugan, Thomas A.
Newman, James B.
Palmeter, Roy A., Ph. B.
Pendleton, Edmund, B. L.
Petersberger, Isaac
Plum, Jerrie L.
Probasco, Emery M.
Quinn, James L.
Ross, Homer L.

Rudolph, Samuel H.
Sallman, Karl E.
Seaman, Ernest W.
Slaymaker, Ora M.
Smith, Samuel C., Ph. B.
Snyder, Charles W. E., A. B.
Stahl, William S., Ph. B.
Stapleton, Martin W.
Thomas, Charles M.
Van Nice, Isaac W.
Wakefield, Albert O., A. B.
Walling, Herman B.
Washburn, Charles H.
Watkins, Charles G., M. S.
Watson, Joseph O., A. M.
White, William A.
Wilson, Edwin B., Ph. B.
Winters, Samuel L., A. M.
Wood, Benjamin U.

DEGREES CONFERRED MARCH, 1898.

MEDICAL DEPARTMENT.

Doctor of Medicine.

Abegg, Henry Hervy
Adams, Fred L., B. S.
Allen, Frank Hervey
Anderson, Frederick Eugene
Arent, Asaph
Besore, Walter McKay
Bean, Oley G.
Blake, Charles Wesley
Bossingham, Ottmer N., D. V. M.
Bowen, Jesse William
Briggs, Walter Homer, B. Di.
Campbell, Charles Harvey
Detchon, Hugh Smith
Ely, Francis Argyle
Engle, Harry Perry
Farrell, Albert Martin
Fitz, George G.
Frank, George W.
Fuchs, Adele M.
Habenicht, Robert H.
Hoxie, Will E.
Hull, John Franklin
Jorgensen, Palle Peder Marius
Kearney, Charles Atwell
Knudson, Becker Christian
Lambert, Fred Earnest
Lester, Harry Sumner
McClintock, John Thomas, A. B.

McIntosh, J. Drusie
Mecum, John Warren
Mereness, Herbert Dayton
Morgans, Samuel Lewis
Moulton, Milo Willie
Nass, Hildus Augustinus O.
Noe, Charles Fred
Parker, Ralph H., M. Di.
Parker, William Gilman
Pence, Laurence Waldo, B. Di.
Purcell, Bert E.
Replogle, Jerry A., D. V. S.
Rogers, Claude Bernard
Sackett, Claude Conwell
Snyder, John Franklin
Stover, Emery Ellsworth
Thielen, Michael H., M. Di.
Thornton, Albert Herrick
Walker, Frederick Earl
Walker, James C.
Willsey, Frank Brown
Wright, Charles Edward

HOMŒOPATHIC MEDICAL DEPARTMENT.

Doctor of Medicine.

Bailey, Ida Holson
Coleman, Jennie
Farnum, Earl P.
Kauffman, Wm. A.
Lambert, Elmer J.
Sarchet, Lloyd H.
Skinner, Fred C.
Todd, Victor C.

Nurses.

Graves, Sara L.
Hawkins, Alice

DENTAL DEPARTMENT.

Doctor of Dental Surgery.

Barrera, Isaac
Beam, Frank N.
Bingham, Frederick Nathan
Bradley, William Oscar
Brock, Herbert Bruce
Brooks, George
Brown, Curtis Henry
Brown, Sim Chaney
Calhoun, Joseph Farrar
Crandall, Walter Gove
Davis, Walter Arthur
Daugherty, James Bertis
Deetkin, Julius Charles
Dillinger, Hanna

Eickelberg, George Charles
Eichar, Cora Leone
Fawkes, Charles James
Fickes, Josiah Barton
Gable, John Carlton
Lindsay, Clayton Burns
McClelland, Freeman
McClanahan, William B.
McKee, John Wesley
Meis, Herman James
Miller, Wm. C.
Morrow, Burton Allen
Ogg, Mahlon D.
Patton, Jefferson Hollister
Read, William M.
Reynard, May
Gary, Arthur George
Grafton, Charl Warwick
Godlove, George Wesley
Hall, Robert W.
Hayes, Clinton LeGrande
Henle, Mathias Francis
Hirons, Jennie
Hollenbeck, Chas. Dighton
Hood, Guerne Tuttle
Hope, Bird Norris
Johnson, Francis Alexander
Joslin, Walter Trich
Keeler, Howard Denton
Kinsley, Jason Daniel
Lambert, Nella Maxwell
Lawton, Earnest John
Leech, Charles Sloan
Leigh, Lloyd Charles
Lillibridge, William Otis
Rice, James Kinlon
Rundorff, Arthur H.
Sensibaugh, William Chandler
Starbuck, Adelbert W.
Sutton, Harry Burse
Tinker, E. Fay
Torrance, Charles Anderson
Truax, Frederick Elmer
Webb, John Everett
Weikert, William Henry
Wells, Frederick Paine
Wood, George Leroy

DEPARTMENT OF PHARMACY.

Graduates in Pharmacy.

Brinton, Gilbert Edward
Buss, Frederic John
Gearhart, Newton Arthur
Nixon, Robert Burns
Park, Charles Grant
Prader, Dolph Christian
Tague, Marion Samuel
White, Louis Mortimore

COLLEGIATE DEPARTMENT.

GRADUATE STUDENTS.

Resident Candidates for the Master's Degree.

Baker, Irving W., B. Ph.,	Political Philosophy, United States History.
Bauer, George N., B. S.,	Differential Equations, Modern Geometric Theories.
Bowman, Charles H., B. Ph.,	Physics, Mathematics.
Burge, Albertus J., B. S.,	Morphology, Zoology.
Butler, Maud B., B. Ph.,	History, French.
Cameron, John E., B. S.,	Botany, Zoology.
Dorcas, Herbert C., B. Ph.,	Pedagogy, Psychology.
Ely, Mary Barber, B. Ph.,	French, History.
Fracker, George C., B. Ph.,	Pedagogy, Psychology.
Freeman, Mae A., B. Ph.,	English, Pedagogy.
Gilbert, Lydia L., B. Ph.,	English, History.
Hartman, Russell T., B. S.,	Geology, Chemistry.
Hilsinger, George E., A. B.,	Political Science, English.
Horack, Frank E., B. Ph.,	Comp. Const. Law, Philosophy.
Jackson, Lester T., B. S.,	Chemistry, Mathematics.
Jones, Elizabeth D., B. Ph.,	Pedagogy, Morphology.
Lorenz, Charles F., B. S.,	Physics, Mathematics.
Meissner, John, B. Ph.,	Pedagogy, Political Economy.
Merritt, Fred D., B. S.,	Political Science, History.
Savage, Thomas E., B. S.,	Geology, Botany.
Schlenker, Carl, A. B.,	German Classic Drama, History of Prussia.
Seymour, Libbie, A. B.,	Pedagogy.

Sherwood, Elizabeth L., A. B.,	German, French.
Shimek, Bohumil, C. E.,	Botany, History.
Smith, Charles L, A. B.,	Central American Plants, History of Botany.
Stanley, Clarence J., B. S.,	Chemistry, Physics.
Taylor, Kathryn M., B. Ph.,	Latin, German.
Thompson, George F., B. Ph.,	Paleontology, Botany.
Thompson, L. L., B. S.,	History, Principles of U. S. Government.
Thorn, Clifford J., A. B.,	Comp. Const. Law, Political Economy.
Watt, Walter Gilmore, A. B.,	Economics, History.
Zimmerman, Mary A., A. B.,	English Literature, Latin.

Non-Resident Candidates for the Master's Degree.

Bartsch, Paul, B. S.,	Ornithology, Conchology.
Bettenga, Everett P., B. Ph.,	German, Pedagogy.
Briggs, George N., A. B.,	Pedagogy, Principles of U. S. Gov't.
Brown, Florence E., B. Ph.,	Abnormal Psychology, Animal Morphology.
Burdick, Anna L., B. S.,	Latin, English Literature.
Crary, Elisha S., B. Ph.,	Political Science, History.
Crone, R. B., B. Ph.,	Mediæval History, Economics.
Ensign, Forest C., B. Ph.,	Sociology, Pedagogy.
Fitzpatrick, Mary L., B. S.,	Botany, French.
Fitzpatrick, Thomas J., B. S.,	Botany, Geology.
Francis, Bruce, B. Ph.,	Pedagogy, History.
Gilchrist, Redelia, B. Ph.,	Latin, Anglo-Saxon.
Gilfillan, Dora, B. Ph.,	German, French.
Graves, W. A., A. B.,	Pedagogy.
Hamilton, Arthur S., B. S.,	Abnormal Psychology, Speculative Zoology.
Hearst, W. L., B. Ph.,	Sociology, History.
Hornby, John A., B. Ph.,	English Novel, German.
Keeler, W. C., B. Ph.,	U. S. History, Comp. Const. Law.
Kelso, Inez F., B. Ph.,	History, Political Science.

Leach, Robert E., B. Ph.,	Latin, Philosophy of Lucretius.
Lovell, Jessie R., B. Ph.,	History, Political Science.
Lynch, Charles J., B. Ph.,	History, U. S. Government.
McAlvin, James G., B. Ph., M. D.,	Sociology, History.
Parsons, Louis A., A. B.,	Physics, Mathematics.
Paxson, Susan, B. Ph.,	Pedagogy, Latin.
Reever, W. H., B. Ph.,	History, Political Economy.
Rigg, G. B., B. S.,	Cryptogamic Botany, Entomology.
Sayers, S. Jefferson, B. Ph.,	U. S. History, Administration.
Seevers, Zoe Williams, A. B.,	English Literature, French Literature.
Shepard, H. H., B. Ph.,	Economics, U. S. History.
Thompson, Marie D., B. Ph.,	Pedagogy, English.
Watson, Joseph O., A. M.,	Economics, History.
*Weidner, C. W., B. S.,	History, Political Science.
Williams, H. P., A. B.,	Ethics, Economics.

Resident Graduates not Candidates for a Degree.

Allin, Norra, B. Ph.
Barber, Katherine Brainerd, B. Ph.
Brock, Frank Victor, A. M.
Brown, Charles Sumner, A. B., (Rochester University.)
Cavanagh, Lucy, B. Ph.
Donohoe, Anthony P., B. S.
Eaton, Emma, LL. B., (University of Michigan.)
Hammond, Juliet, A. B., (Smith College.)
Holmes, M. Roberta, A. M.
Holson, Lulu C., B. Ph.
Huebner, Charles Frederick, Jr., B. Ph.
Hughes, Louise, A. M.
McGuire, Mary, B. S.
Neff, Mary Lawson, B. Ph.
Otto, Mary Laura, B. Ph.
Paine, Katharine, B. Ph.
Parker, Bessie G., B. Ph.

*Died in October 1897.

Plum, Harry Grant, A. M.
Rigby, Elsie M., M. S., (Cornell College.)
Van Law, C. H., A. M.
Wickham, Fannie Thompson, A. M.
Williams, Bertha, B. Ph.

SENIOR CLASS.

NAME.	COURSE.	RESIDENCE.
Anderson, Robinson Gregg	Sc.	West Union.
Anderson, Theodore	Ph.	Iowa City.
Barker, William Lloyd	Ph.	Cresco.
Beardsley, John	Ph.	Burlington.
Blume, Fred M.	Cl.	Audubon.
Brown, Samuel Joe	Cl.	Ottumwa.
Brusie, Ida M.	Ph.	Peoria, Ill.
Carroll, Nan Grace	Ph.	Iowa City.
Carter, George H.	Ph.	Le Mars.
Clayton, Joseph E.	Ph.	Rowley.
Clements, Melville Fisk	Civ. Eng.	Agency.
Cobb, Clyde Beryl	Ph.	Harlan.
Coldren, May Belle	Ph.	Iowa City.
Copeland, Edwin Grant	Sc.	Iowa City.
Corlett, Jessie M.	Ph.	Iowa City.
Dalbey, Irvin	Sc.	Olin.
Denny, Alden Ray	Ph.	Mt. Union.
Dey, Ann Hull	Ph.	Iowa City.
Dunham, Martha Aurilla	Ph.	Mason City.
Eaton, William Hammond	Sc.	Iowa City.
Emry, Martha Elva	Ph.	Brighton.
Eustis, Carl	Ph.	Stuart.
Frailey, Joseph Robinson	Ph.	Fort Madison.
Gabriel, Jennie May	Cl.	Des Moines.
Golden, Ethel Rose	Ph.	Vinton.
Gonwick, Clara	Ph.	Northwood.
Hastings, Jessie Pearl	Ph.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Hatch, Daisy Eleanor	Cl.	Iowa City.
Havner, Horace Moore	Sc.	New York.
Hilpert, Meier George	Sc.	Farmington.
Hilsinger, Margaret L.	Cl.	Sabula.
Hobby, Edwin E.	Sc.	Iowa City.
Hollingsworth, Frank	Cl.	Perry.
Holsteen, Fred S.	Ph.	Burlington.
Horine, Ora Huntington	Ph.	Coon Rapids.
Hornibrook, Mary	Cl.	Cherokee.
Hoskins, John Bennett	Cl.	Sioux City.
Hulsebus, Elizabeth	Ph.	Burlington.
Humphrey, Maude	Ph.	Eagle Centre.
Irish, Fred M.	Sc.	Tempe, Arizona.
Jacobs, Marcia A.	Cl.	Iowa City.
Johnson, Maro	Civ. Eng.	Iowa City.
Kearwille, Elizabeth	Ph.	Red Oak.
Kelly, Mary Celestia	Ph.	Iowa City.
Kriechbaum, Ida Elizabeth	Ph.	Burlington.
Lenocker, Francis E.	Ph.	Dexter.
Lindeman, Frank	Ph.	Griswold.
Lodwick, Libbie	Ph.	Eldon.
Lowman, Minerva M.	Ph.	Iowa City.
Lytle, Mary	Ph.	Iowa City.
McCurdy, Lena	Cl.	Oskaloosa.
Morton, Mary Gertrude	Cl.	Iowa Falls.
Northey, Della Frances	Cl.	Dubuque.
Oleson, Ole N.	Cl.	Flugstad.
Otto, Joe M.	Ph.	Iowa City.
Otto, Ralph	Cl.	Iowa City.
Patterson, James Grant	Ph.	Leighton.
Paxson, Ruthanna	Ph.	Manchester.
Prall, John Cornelius	Ph.	Villisca.
Preston, Gertrude Elaine	Ph.	Iowa City.
Rea, George M.	Ph.	Grundy Centre.
St. John, Maud	Ph.	Des Moines.
Saylor, Earl Clarence	El. Eng.	Ogden.

NAME.	COURSE.	RESIDENCE.
Sharpe, James Joseph	Cl.	Iowa Falls.
Smith, Carsten C.	Cl.	Decorah.
Smith, Ralph J.	Ph.	Iowa City.
Smith, William Avery	Ph.	Toledo.
Soleman, Fred Armstrong	Ph.	Tama.
Stover, George Elmer	Ph.	Iowa City.
Stull, Wilfred N.	Sc.	Iowa City.
Swisher, Leonard A.	Ph.	Iowa City.
Taylor, Herbert Edward	Ph.	Postville.
Veblen, Oswald	Cl.	Iowa City.
Weed, Fredmund Carson	Cl.	Corning.
Weinrich, Herman P.	Ph.	Burlington.
Welty, Ira Colton	Ph.	Colo.
Werthmueller, Ferdinand R.	Sc.	Burlington.
Whitacre, Grace	Sc.	Iowa City.
Williams, Mark Wayne	Cl.	Des Moines.
Williams, Fred Paul	Cl.	Des Moines.
Young, LeRoy Erwin	Civ. Eng.	Iowa City.

JUNIOR CLASS.

NAME.	COURSE.	RESIDENCE.
Adams, Georgia	Ph.	Solon.
Ady, Florence Rae	Ph.	Iowa City.
Alford, Della Gates	Ph.	Waterloo.
Anderson, Fannie E.	Ph.	West Union.
Ankeney, Walter S.	Sc.	Des Moines.
Balle, Julius E.	Ph.	Denison.
Barber, Nathan Brainerd	Civ. Eng.	Iowa City.
Barclay, Wade C.	Cl.	Tiffin.
Blackmore, Ralph Davis	Sc.	Aplington.
Bowman, Ernest Charles	Civ. Eng.	Solon.
Bradley, Charles C.	Cl.	Council Bluffs.
Brink, Frank N.	Ph.	Atlantic.
Brush, William Burritt	Cl.	Ottumwa.

NAME.	COURSE.	RESIDENCE.
Burt, Alfred James	Ph.	Emmetsburg.
Chase, Will B.	Sc.	Des Moines.
Clapp, Helen Leila	Ph.	Shelby.
Coad, Harry Elmer	Ph.	Mt. Union.
Codner, Frances T.	Sc.	New London.
Curtis, Maurice Leonard	Cl.	Knoxville.
Dean, Ray H.	Sc.	Muscatine.
Eby, Moray L.	Sc.	Adair.
Ehret, Anna Lillian	Ph.	Iowa City.
Ensign, Lucie M.	Ph.	Iowa City.
Eustis, Carrie Luella	Ph.	Stuart.
Fellingham, John H.	Cl.	West Side.
Foster, Mabel Marcella	Ph.	Iowa City.
Freligh, Clarence Neil	Sc.	New Sharon.
Garrett, Charles Reese	Cl.	Troy.
Giese, Charles Oscar	Ph.	Pleasant Grove.
Gilchrist, Helen Cox	Ph.	Iowa City.
Graff, Lulu A.	Sc.	Iowa City.
Green, Ellen Cecelia	Cl.	Sioux City.
Greeley, Lennie Mabyn	Ph.	Iowa City.
Ham, John Webb	Sc.	Iowa City.
Hawk, Ira Tapper	Cl.	Winterset.
Hearst, Mamie Frances	Ph.	Cedar Falls.
Hoag, Lindley Murray	Ph.	Iowa Falls.
Holt, John Wesley	Ph.	Swedesburg.
Horack, H. Claude	Ph.	Iowa City.
Howard, Libbie	Ph.	Jefferson.
Howell, Lloyd	El. Eng.	Iowa City.
Hull, Elmer C.	Ph.	Iowa City.
Humphrey, Charles William	Ph.	Winterset.
Hutchison, Eugene	Ph.	Lake City.
Jarvis, Calvin	Ph.	Iowa City.
Jayne, Eben Hay	Civ. Eng.	Iowa City.
Jones, Lillian	Ph.	Iowa City.
Kellogg, Charles Francis	Ph.	Burt.
Kemmerer, T. Wilbert	Sc.	Eldridge.

NAME.	COURSE.	RESIDENCE.
Kimball, Alfred Lee	El. Eng.	Iowa City.
Lambert, J. J.	Ph.	Cedar Falls.
Lancaster, Henry Hay	Ph.	Allerton.
Latta, Frank Elwyn	Cl.	Washington.
Lee, Leslie Parvin	Ph.	Iowa City.
Lewis, Charles Levi	Ph.	Cambridge.
Loomis, William W.	Ph.	Clermont,
Lorenz, Max O.	Cl.	Burlington.
Louis, John J.	Ph.	Harlan.
Lukenbell, Ella	Cl.	Sioux City.
Lynch, George A.	Cl.	Blairstown.
McCormick, John B.	Cl.	Churdan.
McCurdy, Ralph Bruce	Ph.	Oskaloosa.
McCutchen, Lydia May	Cl.	Rock Rapids.
McFarland, Winifred	Ph.	Columbus Junction.
Marquis, Frank L.	Cl.	Waterloo.
Miller, James F.	Civ. Eng.	Strawberry Point.
Mosnat, H. Roy	Ph.	Belle Plaine.
Mueller, Herman August	Ph.	McBride.
Myers, Milfred	Ph.	Rockford, Ill.
Myers, Perry C.	Sc.	Williamsburg.
Neal, Frank Carlton	Ph.	Stuart.
Nelson, John S.	Ph.	Madrid.
Ogden, John Francis	Ph.	Pleasanton.
Owen, Erza Lois	Ph.	Iowa City.
Peet, Delbert C.	Ph.	Anamosa.
Rea, Ralph Randolph	Sc.	Grundy Center.
Riggs, Hattie	Ph.	Iowa City.
Roach, Lorin J.	Ph.	Rock Rapids.
Roberts, Anna E.	Ph.	Iowa City.
Robinson, Jessie	Ph.	Sioux City.
Safley, Agnes Isabel	Sc.	Tipton.
Schmidt, Bernard Edward	Sc.	Farmington.
Schoonover, George L.	Ph.	Anamosa.
Seymour, Edith Maria	Sc.	Iowa City.
Shaffer, Nina R.	Ph.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Smith, Effie Winifred	Ph.	Iowa Falls.
Smith, Tillman	Ph.	Leon.
Startsman, Charles Wentworth	Sc.	Iowa City.
Stein, Harry S.	Ph.	Denmark.
Stevens, Frederick Leroy,	Sc.	Iowa City.
Stober, Antonie J.	Ph.	Brooklyn.
Swisher, Ben	Ph.	Iowa City.
Terry, M. C.	Cl.	Ft. Shaw, Arizona.
Thorburn, Andrew Logan	Ph.	Webster.
Townsend, Egbert R.	Sc.	Iowa City.
Vaughan, Michael Walter	Ph.	Fort Dodge.
Vaughan, Philip T.	Ph.	Fort Dodge.
Watkins, Joseph Cook	Civ. Eng.	Iowa City,
Weeks, Gaylord	Civ. Eng.	Denison.
Weld, LeRoy Dougherty	Sc.	Cedar Rapids.
Weldy, Morton E.	Cl.	New Sharon.
White, Eva May	Ph.	Maynard.
White, Frank G.	Civ. Eng.	Winterset.
White, Lewis Rush	Ph.	Sioux Rapids.
Wickersham, Dorothy T.	Ph.	Capron.
Willett, William S.	Cl.	Tama.
Williams, Charles Allyn	Cl.	Iowa City.
Williams, Fred Almon	Ph.	Neola.
Williams, Mabel Clare	Ph.	Iowa City.
Yule, Edgar Harrison	Sc.	Tipton.

SOPHOMORE CLASS.

NAME.	COURSE.	RESIDENCE.
Albert, Henry	Sc.	Reinbeck.
Angus, Haney Adelbert	Sc.	Burt.
Baker, Frank Milton	Ph.	Emmetsburg.
Baker, J. Clark, Jr.	Ph.	Lucas.
Balle, Minnie	Ph.	Denison.
Beach, Carl Hoff	Sc.	Cedar Falls.

NAME.	COURSE.	RESIDENCE.
Beard, William Finis	Civ. Eng.	Mt. Union.
Beck, William Edmund	Sc.	Sioux City.
Black, Eva E.	Ph.	Iowa City.
Blackmore, Auzman Hodgen	Sc.	Aplington.
Bloom, Myra	Ph.	Iowa City.
Blythe, Edward Ellsworth	Ph.	Williamsburg.
Bowman, John G.	Cl.	Davenport.
Branigar, Frank Waldo	Cl.	Burlington.
Brockway, Alice R.	Ph.	Iowa City.
Brown, J. A.	Sc.	Keosauqua.
Brown, Martha Mead	Ph.	Solon.
Cantwell, John D.	Sc.	Davenport.
Carr, Hubert	Ph.	Manchester.
Carroll, Elizabeth F.	Ph.	Iowa City.
Cass, Austin	Ph.	Harlan.
Chamberlain, Will W.	Ph.	Wyoming.
Childs, Hal Augustin	Sc.	Lenox.
Church, Mae	Sc.	Belmond.
Clark, Mearl	Ph.	Tipton.
Clayton, Mrs. J. E.	Ph.	Iowa City.
Cogswell, Charles Herbert, Jr.	Sc.	Cedar Rapids.
Cole, Arthur Casburn	Ph.	Waterloo.
Consigny, Eugene Frank	Sc.	Avoca.
Cook, Wallace Lewelling	Ph.	Davenport.
Dameron, James Lewis	Cl.	Iowa City.
Deems, Oren Manfred	Sc.	Ottumwa.
Edwards, Anne	Ph.	Iowa City.
Egan, George William	Cl.	California.
Fairall, Henrietta	Sc.	Iowa City.
Fairall, Herbert Snowden, Jr.	Sc.	Iowa City.
Farrington, Minnie	Sc.	Iowa Falls.
Fee, Thomas G.	Ph.	Centerville.
Ferson, Merton Leroy	Ph.	Frendale.
Fletcher, George H.	Ph.	Williamsburg.
Gray, Harry B.	Ph.	Springdale.
Griffith, Harry M.	Ph.	Mt. Ayr.

NAME.	COURSE.	RESIDENCE.
Hagler, Elisha M.	Civ. Eng.	Milton.
Harkness, Gordon Follett	Sc.	Iowa City.
Hartley, May M.	Sc.	Colton, California.
Hartman, Amelia	Ph.	Griswold.
Heath, Maggie May	Ph.	Iowa City.
Hecht, Ralph Henry	Ph.	Tipton.
Hensen, Louie	Ph.	Denison.
Hetzel, Clarence Charles	Sc.	Avoca.
Hobby, Ruth Annis	Sc.	Iowa City.
Hoffman, Frank Phillip	Sc.	Ottumwa.
Hoffman, William Louis	Ph.	Waterloo.
Humphry, Wallace George	Ph.	Hamilton, Ill.
Hunter, Lemuel Amos	Civ. Eng.	Iowa City.
Hurst, Margaret Lillian	Ph.	Leon.
Johnson, Jessie Florence	Cl.	Farlin.
Jones, Clyde Ray	Sc.	Charles City.
Kain, Will E.	Ph.	Algona.
Kierulff, Anna Edwards	Ph.	Montezuma.
Kindall, Joseph W.	Cl.	Onawa.
Kingland, Thomas	Ph.	Mt. Valley.
Klincker, P. John	Ph.	Denison.
Klopp, Laura Emilie	Ph.	Estherville.
Knapp, Leo	Civ. Eng.	Lenox.
Larrabee, Helen	Ph.	Clermont.
Linder, Emma G.	Sc.	Iowa City.
Lingo, Walter M.	Ph.	Norwich.
Louis, Edmund J.	Ph.	Atlantic.
Lovell, G. E.	Ph.	Garner.
McCord, Clyde W.	Cl.	Iowa City.
McCutchen, Fred C.	Ph.	Holstein.
McElroy, G. A.	Sc.	Thurman.
McGee, Alice Florence	Ph.	Iowa City.
McKinney, Henderson H.	Sc.	York, Kansas.
McNeill, Norah	Ph.	Garden Grove.
Macomber, Edith Katharine	Ph.	Carroll.
Mason, Ralph Taylor	Ph.	Albia.

NAME.	COURSE.	RESIDENCE.
Manthe, Katherine	Sc.	Gracehill.
Meggers, Frank Henry	Civ. Eng.	Dysart.
Miller, John William, Jr.	Ph.	Manning.
Mitchell, Ernest Roy	Ph.	Ottumwa.
Morrison, William F.	Ph.	Iowa City.
Moulton, Mark Mills	Cl.	Nashville.
Newbold, Belle Edna	Sc.	Hillsboro.
Nicholas, Edwin Herbert	Ph.	Emmetsburg.
O'Connor, James Lawrence	Ph.	Montrose.
Ogden, Raymond Davis	Ph.	Williamsburg.
Padmore, Julia Rachel	Cl.	Le Mars.
Page, Edna Elizabeth	Cl.	Iowa City.
Paris, Nanna	Ph.	Leon.
Penrose, Thomas Emlen	Sc.	West Branch.
Perkins, Celia Ethel	Ph.	Keosauqua.
Peterson, Nina Margaret	Ph.	Evanston, Wyo.
Phillips, Albin Blackmore	Sc.	Creamery.
Pinkham, Leda	Ph.	Sioux Falls, S. Dak.
Polk, Mamie	Cl.	Winterset.
Porter, Mary Monta	Cl.	Albia.
Purdy, Winifred	Ph.	Iowa City.
Read, Erwin C.	Sc.	Ogden.
Rehkopf, Ned B.	Ph.	Des Moines.
Reid, Frank Beatty	Cl.	Oskaloosa.
Remley, James Edward	Ph.	Anamosa.
Reno, Margaret	Ph.	Iowa City.
Reynolds, Hal Reade	Civ. Eng.	Des Moines.
Rice, Stephen Edward	Civ. Eng.	Green Mountain.
Robins, Elvene	Ph.	Emmetsburg.
Robinson, Alta Aileen	Ph.	Iowa City.
Robish, Albert Arrand	Civ. Eng.	Sumner.
Rue, Lars O.	Sc.	Ridgeway.
Safford, Abbie M.	Sc.	Hamilton, Ill.
Safley, Margaret James	Ph.	Tipton.
Saunders, Herbert C.	Ph.	Manilla.
Savage, Samuel M.	Sc.	Salem.

NAME.	COURSE.	RESIDENCE.
Sawyer, Lizzie M.	Ph.	Iowa City.
Schenk, Erwin	Sc.	Waterloo.
Secrest, Walter S.	Ph.	Downey.
Sheldon, Benj. L.	Sc.	Iowa City.
Sheuerman, Jacob L.	Ph.	Des Moines.
Shuck, May	Ph.	Iowa City.
Simonton, T. M.	Ph.	Sharon Center.
Smith, Robert L.	Ph.	Leon.
Sogard, John	Ph.	Ellsworth.
Speers, Albert Percy	Ph.	Iowa City.
Springer, John Elbert	Cl.	Washington.
Springer, William James	Cl.	Leon.
Spurgeon, Floris J.	Sc.	Iowa City.
Switzer, Lester Edison	Ph.	Iowa City.
Thomas, Will H.	Sc.	Traer.
Thompson, John Morrow	Ph.	Bedford.
Voss, Hertha Louise	Ph.	Davenport.
Waite, Lillian Ethel	Sc.	Iowa City.
Wambach, Albert	Ph.	Webster City.
Warfield, Lyford Wilson	Ph.	Des Moines.
Warner, Loren Ashley	Ph.	Leon.
Way, Kathryn W.	Ph.	Britt.
Weinrich, Oscar L. A.	Sc.	Burlington.
Wells, Frank	Ph.	Miles.
Werts, Charles M.	Sc.	Russell.
Whaley, Holsa Hiram	Sc.	Aplington.
Whitaker, Ellis J.	Cl.	Davenport.
Whitcomb, Bonner	El. Eng.	Des Moines.
Wieneke, Laura Anna	Sc.	Iowa City.
Willis, Bertha Belle	Ph.	Iowa City.
Wright, John Henry Jr.	Sc.	Marshalltown.
Wyman, Anna Wilson	Ph.	Des Moines.
Yates, Edward Gilbert	Ph.	Williamsburg.

FRESHMAN CLASS.

NAME.	COURSE.	RESIDENCE.
Alden, Henry F.	Sc.	Davenport.
Allen, Charles F.	Sc.	Iowa City.
Allin, George R.	Ph.	Iowa City.
Anderson, Laura	Ph.	Iowa City.
Anderson, Rudolph Martin	Ph.	Forest City.
Anthony, Charles Henry	Sc.	Iowa City.
Bailey, Frank Sidney	Ph.	Iowa City.
Bailey, Frederick W.	Sc.	Iowa City.
Ball, George Washington	Ph.	Iowa City.
Banister, Nettie	Ph.	Cherokee.
Bannister, Robert J.	Ph.	Ottumwa.
Barrett, Anna Moore	Ph.	Iowa City.
Becker, Gertrude Adah	Ph.	Newton, Kan.
BeDillon, Abraham Addison	Sc.	Oskaloosa.
Bell, Everett Garfield	Cl.	Milton.
Benham, Bessie	Ph.	Shelby.
Berry, Edmund C.	Sc.	Livermore.
Berry, Ethel Maxwell	Ph.	Chillicothe.
Berry, J. K. M.	Cl.	Cedar Rapids.
Birk, Levi Albert	Civ. Eng.	Anamosa.
Boddy, Marshall V.	Ph.	Ayrshire.
Boler, John	Ph.	Atlantic.
Bond, Perry Avery	Sc.	Sioux City.
Booth, Charlotte Esther	Cl.	Harlan.
Boudreau, Franklin M.	Sc.	Iowa City.
Brackett, Otto T.	Sc.	Iowa City.
Bradbury, Roy R.	Sc.	Marshalltown.
Bray, William Sherrill	Civ. Eng.	Oskaloosa.
Briggs, Fletcher	Sc.	Nevada.
Brockway, James Madison	Ph.	Iowa City.
Brown, Clarence A.	Sc.	Sioux City.
Burrier, Emmett F.	Sc.	Farmington.
Burrus, James H.	Cl.	Maple Grove.
Burton, Harry Edward	Ph.	Onawa.

NAME.	COURSE.	RESIDENCE.
Bush, Kenneth Roy	Sc.	Le Mars.
Byrnes, Ralph L.	Sc.	Iowa City.
Carder, Helen L.	Ph.	Iowa City.
Carris, Clara M.	Ph.	Wira.
Carroll, Mary Emma	Ph.	Iowa City.
Clapp, Mortimer Edwy	Sc.	Shelby.
Clearman, Hattie M.	Ph.	Oxford.
Close, Katherine S.	Ph.	Iowa City.
Conley, Agnes Jane Mercedes	Ph.	New Hampton.
Converse, Charles Crozat	Ph.	Cresco.
Cook, Roy Arthur	Cl.	Independence.
Cox, Clifford Vernard	Sc.	Newton.
Cushing, Edith Wylie	Cl.	Davenport.
Darrow, J. Don	Ph.	Columbus Junction.
Daum, Selma	Ph.	West Liberty.
Davies, Edward Edwin	Sc.	Dixon.
Dennis, Bartie Ann	Ph.	Villisca.
Dickinson, Jerry Wells	Ph.	Larchwood.
Downing, Harold B.	Ph.	Wellman.
Downing, Ralph V.	Ph.	Wellman.
Drake, Fred Collins	Cl.	Adel.
Dye, Charles Westley	Sc.	Macedonia.
Eaton, John Alvin	Civ. Eng.	Creston.
Eberhart, William Vaughan	Sc.	Newton.
Eddy, Helen M.	Ph.	Marengo.
Felkner, Ida	Ph.	Downey.
Fenton, Jennie Inez	Ph.	Eldora.
Fesenbeck, J. Alwin	Ph.	Danbury.
Fracker, Nora R.	Ph.	Iowa City.
Freeman, Walter J.	Ph.	Iowa City.
Gardner, Lucy Florence	Ph.	Iowa City.
Gilchrist, Janet Marjorie	Ph.	Iowa City.
Goettsch, Henry Max	Ph.	Davenport.
Gow, Annie Louise	Ph.	Greenfield.
Gow, James Ellis	Ph.	Greenfield.
Griffith, John George	Ph.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Haas, Laura N.	Ph.	Iowa City.
Haller, Julius T.	Sc.	Davenport.
Ham, George Norval	Ph.	Iowa City.
Hanson, Frank F.	Sc.	Monmouth.
Harvey. James F.	Ph.	Leon.
Hathway, Ethel Calista	Cl.	Webster City.
Hershire, Mildred	Ph.	Iowa City.
Hickenlooper, Thomas Wallace	Civ. Eng.	Albia.
Hinchon, William D.	Ph.	Algona.
Hobby, William Richard	Civ. Eng.	Iowa City.
Hoffman, Paul M.	Sc.	Muscatine.
Holbrook, C. E.	Ph.	Onawa.
Holbrook, F. K.	Sc.	Tipton.
Howard, Alice	Sc.	Marshalltown.
Hruska, Victoria	Ph.	Spillville.
Hughes, Homer	Sc.	Iowa City.
Hulbert, Adda Beatrice	Ph.	Fontanelle.
Hull, Pearl	Ph.	Iowa City.
Hurst, John Francis	Sc.	Leon.
Ilgenfritz, Burr D.	Ph.	Clarksville.
Ingersoll, Helen Frances	Ph.	Cherokee.
Jensen, Frank T.	Civ. Eng.	Dysart.
Johnson, Emma	Ph.	Farlin.
Johnson, Eva Nancy	Sc.	Holstein.
Johnson, John Peter	El. Eng.	Hampton.
Johnson, Robert Joseph	Ph.	Holstein.
Jorgensen, James Edwin	Cl.	West Side.
Kelley, Rita Amanda	Ph.	Iowa City.
Kephart, Milton Lawrence	Ph.	Shueyville.
Kingsbury, Maud Cleaveland	Ph.	Iowa City.
Kitterman, P. Gad	Sc.	Ottumwa.
Koontz, G. Wilson	Sc.	Iowa City.
Kuck, Orlando A.	Sc.	Charles City.
Lawrence, Carl Austin Bickford	Ph.	Sibley.
Lewis, Arthur C.	Sc.	Macedonia.
Lewis, Laura	Sc.	Macedonia.

NAME.	COURSE.	RESIDENCE.
Lodwick, Ruth	Ph.	Eldon.
McCaffree, Howard A.	Cl.	Waverly Junction.
McCarthy, M. J.	Ph.	Struble.
McClain, Donald	Cl.	Iowa City.
McCord, Charles Joseph	Cl.	Iowa City.
McCulla, Walter Philo	Ph.	Sutherland.
McCutchen, Ezra H., Jr.	Ph.	Holstein.
MacDonald, Charles S.	Cl.	Council Bluffs.
McLaughlin, Harold M.	Sc.	Mason City.
MacMillan, Glenn V.	Ph.	Rock Rapids.
Mahin, Harold Joseph	Ph.	Muscatine.
Mann, Loulu Mina	Ph.	Des Moines.
Mantz, Frank J.	Ph.	Audubon.
Merriau, Fred S.	Cl.	Marble Rock.
Miller, Daniel Fry, Jr.	Cl.	Keokuk.
Miller, Era	Sc.	Hamilton, Ill.
Moore, William Franklin	Cl.	Dale.
Mortland, Inez	Ph.	Montezuma.
Murphy, William H.	Ph.	Onawa.
Nelson, Frank D.	Cl.	Harlan.
Noland, Harry B.	Ph.	Cedar Falls.
Otto, Lucia C.	Ph.	Iowa City.
Paarmann, J. H.	Ph.	Davenport.
Paine, George W.	Sc.	Burt.
Peterson, Walter H.	Ph.	Davenport.
Plum, Hattie	Ph.	Shelby.
Ragan, Ella	Sc.	Iowa City.
Rahn, Jerry Frederick	Sc.	La Porte City.
Randall, Van Quincy	El. Eng.	Kansas City.
Rankin, Warren L.	Ph.	Carson.
Rate, Robert Gower	Ph.	Iowa City.
Reed, Luther Oliver	Sc.	Burr Oak.
Remley, Arthur	Sc.	Anamosa.
Remley, George E.	Ph.	Iowa City.
Riggs, Obie N.	Sc.	Iowa City.
Robinson, Claude Lyle	Sc.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Rosser, B. P.	Sc.	Troy.
Rowe, Frank N.	Sc.	Iowa City.
Russell, Erle Willard	Cl.	Adel.
Sanders, George E.	Sc.	Palm Beach, Fla.
Scales, Richard	Cl.	Ackley.
Schlesinger, Leo R.	Sc.	Hampton.
Schultz, Dorothy Matilda	Cl.	Burlington.
Seymour, William T.	Civ. Eng.	Iowa City.
Sieg, Lee P.	Sc.	Marshalltown.
Sieg, Stanley B.	Sc.	Marshalltown.
Slater, Marie W.	Ph.	Iowa City.
Slavata, Jennie	Sc.	Iowa City.
Smith, C. Horton	Civ. Eng.	Iowa City.
Soesbe, Clarence William	Cl.	Greene.
Spurrier, Mary Madge	Ph.	Des Moines.
Staehle, Henry D.	Ph.	Earlville.
Sterling, Editha Hortense	Ph.	Iowa City.
Storey, Lealie	Ph.	Dysart.
Stuart, Clara	Ph.	West Branch.
Sweney, Gail	Ph.	Osage.
Swisher, Esther McDowell	Ph.	Iowa City.
Taylor, Mary Ethel	Ph.	Iowa City.
Thomas, M. Ellen	Ph.	Iowa City.
Tulloss, Carolyn M.	Ph.	Iowa City.
Umberger, T. D. Terrill	Sc.	Burlington.
Waite, Lovell Edith	Ph.	Iowa City.
Walker, Lucy Mabel	Ph.	Iowa City.
Warner, Loren Ashley	Ph.	Luana.
Warren, Clyde Madison	Ph.	Glenwood.
Watkins, David A.	Sc.	Neola.
Westcott, Hortense Emmer	Ph.	Iowa City.
Whedon, Arthur D.	Sc.	Iowa City.
Wiedow, Henry	Sc.	Victor.
Williams, Samuel Clyde	Sc.	Iowa City.
Willis, Faith Gertrude	Ph.	Iowa City.
Wright, Hiram Newton	Ph.	Mt. Pleasant.

NAME.	COURSE.	RESIDENCE.
Young, Blanche	Sc.	North Liberty.
Young, John Wray	Sc.	Bloomfield.

SPECIAL STUDENTS.

NAME.	SUBJECT.	RESIDENCE.
Abel, Eva Vesta	English, Physics.	Humeston.
Ashe, T. G.	Psychology.	La Porte City.
Benham, Lewis A.	Chemistry.	Shelby.
Barrett, William L.	English.	Waterloo.
Bawden, Stephen P.	German.	Davenport.
Belsheim, Gullik H.	Politics.	Leland.
Bickley, William H.	Psychology.	Sioux City.
Bliven, George H.	Psychology.	Sioux City.
Bower, Charles A.	Psychology.	West Union.
Breene, Harry D.	English.	Iowa City.
Brown, Mrs. Jennie R.	Geology.	Iowa City.
Buss, Luona Adele	English.	Hammond, N. Y.
Carmichael, Eugene	Psychology.	Iowa City.
Carpenter, Arthur E.	Politics.	Columbus Junction.
Crary, Charles Judson	History.	Lafayette, Ind.
Dayton, Jennie L.	French.	Iowa City.
Dickinson, Lester J.	Logic, Politics.	Danbury.
Dilley, Wesley, B. Ph.	Economics.	Hawarden.
Durbin, Fred	Politics.	Emerson.
Edson, J. T.	Politics.	Blaine.
Eilers, Paul	Psychology.	Monticello.
Frank, Walter O.	English, Economics.	Red Oak.
French, R. Fred	Politics.	Independence.
Goodenough, Walter R.	Zoology, Latin.	Council Bluffs.
Gothard, Stanton B.	German.	Atlantic.
Hagander, Oscar W.	Logic.	Keokuk.
Hall, James Frank	History, English.	Eddyville.
Hays, Charles R.	Politics.	Norfolk, Neb.
Hill, Alice L.	Psychology.	Iowa City.
Holly, William R.	Logic.	Meriden.
Hormel, Eckert, Jr.	Chemistry.	Iowa City.

NAME.	SUBJECT.	RESIDENCE.
Horton, Frank J.	History.	Iowa City.
Johannsen, Palmrich E.	English.	Walnut.
Kelly, Arthur Roland	Mathematics.	Iowa City.
Kramer, Anna v. B.	English, German.	Iowa City.
Kuntze, Otto	Geology, Chemistry.	
Lenz, John G.	Psychology.	Cedar Rapids.
Lynch, Thomas F.	Politics.	Barnum.
McBeth, Robert	Logic, Politics.	Keosauqua.
McCarty, Thomas Francis	Mathematics, Latin.	Walnut.
McKee, John William	Politics, Economics.	Conesville.
McReynolds, Scott	Economics, History.	Valdosta, Ga.
Mattison, George E.	Politics.	Clinton.
Meister, M. G.	Psychology.	La Porte City.
Meyers, Joseph Henry	German.	Templeton.
Mitchell, Fred L.	Psychology.	Sibley.
Patterson, George E.	Logic.	Algona.
Peck, Paul, A. B.,	History.	Council Bluffs.
Peek, L. S.	English.	Normal, Ill.
Popham, Amelia A.	English, History.	Williamsburg.
Rigby, Elsie M., A. M.	Politics.	Mt. Vernon.
Roberg, Richard	Politics.	Decorah.
Sager, Irene M.	German.	Iowa City.
Sargent, Amos H., B. Ph.	History.	Grundy Centre.
Sharp, E. Floyd	Psychology.	Dexter.
Sims, Ruth Hairston	French.	Iowa City.
Smith, Edward A.	English.	Omaha, Neb.
Springmire, Fannie	Politics, Botany.	Iowa City.
Tanner, John F.	German.	Iowa City.
Tourtellot, Louis J.	Biology, Botany.	Wyoming.
Treimer, Anna	German, French.	Dixon.
Turner, E. J., B. Di.	Politics.	Manson.
Vandermast, Joseph W.	History, Economics.	Monroe.
Webber, John Francis	Economics.	Ferris, Ill.
Welty, Bert B.	Politics.	Colo.
Willoughby, Hugh A.	Economics.	Grundy Centre.
Wise, Henry	German, French.	Thompson, Ark.

LAW DEPARTMENT.

SENIOR CLASS.

NAME.	DEGREE.	RESIDENCE.
Allen, George Kirkland		Estherville.
Anderson, Theodore		Iowa City.
Ashe, Thomas Gregory		La Porte City.
Baker, Irving Wesley		Iowa City.
	Ph. B., State University of Iowa.	
Baker, Jesse Clark, Jr.		Lucas.
Barrett, Will Louis		Waterloo.
Bawden, Stephen Phelps		Davenport.
Beard, Henry Clay		Mt. Ayr.
Berry, Ernest James		Alta.
Bliven, George Horace		Sioux City.
Brewster, George Farquhar		Sheldon.
Bronner, George Alois		Corning.
Bruce, James		Rolfe.
Bushyager, Henry B.		Sheffield.
Bussard, Melville K.		Iowa City.
Clark, Charles Warner		Montezuma.
	Ph. B., Iowa College.	
Clements, Frank H.		Newton.
	Ph. B., Iowa College.	
Coad, James Coit		Mt. Pleasant.
Cobb, Dennis Justus		Irwin.
Cosson, George W.		Manning.
Crookham, John Addison		Oskaloosa.
Davis, Walter Morton		Iowa City.
	Ph. B., State University of Iowa.	
Draper, William Horace		Iowa City.
Dunham, Henry Clarence		Hawarden.

NAME.	DEGREE.	RESIDENCE.
Dunlap, Ralph Luther		Iowa City.
Durbin, Fred		Emerson.
Dutcher, Louis William		Iowa City.
Dykins, Charles W.		Hawkeye.
Eversmeyer, Louise		Muscatine.
Fry, Joseph Henry		Iowa City.
Fuller, Homer Austin		Mt. Ayr.
*Gamble, Harry Lee		Perry.
Grattan, Paul Hersey		Elkton, S. D.
	B. S., South Dakota Agricultural College.	
Green, George Alfred		Cherokee.
Hall, James Clark		Davenport.
Hamann, Albert William		Davenport.
	A. B., State University of Iowa.	
Hanley, Peter Joseph		Nira.
Hanson, Harry Webster		Mt. Pleasant.
	Ph. B., State University of Iowa.	
Hardy, Rufus Lee		Bloomfield.
Harrison, Albert Dixon		Iowa City.
Head, Roscoe Conkling		Jefferson.
Hendrick, Berte		Waukon.
Hering, James Clinton		Cedar Rapids.
Hilsinger, George Earl		Sabula.
	Ph. B., Iowa College.	
Hoffman, Arthur		Muscatine.
Horton, Frank Jodon		Iowa City.
Hosford, Richard Waller		Dubuque.
	A. B., Oberlin College.	
Hughes, Samuel Judson		Corydon.
Hull, John Kress		Moline, Ill.
Hyndman, John Alexander		Chicago, Ill.
Johannsen, Palmrich E.		Walnut.
Keenan, Edward Patrick		Le Mars.
Kellogg, Charles Francis		Burt.

*Died March 16, 1898.

NAME.	DEGREE.	RESIDENCE.
Kelly, William Francis		Waterloo.
*Kitchen, George Pusey		Warrenton, Va.
Klingenberg, Theodore William		Dubuque.
Komarek, Edward Wenceslaus		New Prague, Minn.
Krause, Oscar		Garwin.
Larrabee, Frederic		Clermont.
	Ph. B., State University of Iowa.	
Lee, Thomas Francis		Omaha, Neb.
	A. B., Creighton University.	
Lewis, Burton Kellogg		Sioux City.
Liffring, John Dominick		Cherokee.
Livick, Ernest		Northwood.
Long, Frank Kelso,		Whitten.
	B. D., Western College.	
McGuire, Augustine Joseph		Iowa City.
McNeil, Harry Hallam		Indianola.
	A. B., Simpson College.	
Marquis, Frank L.		Waterloo.
Mather, Charles E.		Springdale.
Maxwell, Erza Austin		Greene.
	B. S., Upper Iowa University.	
Meister, Melvin George		La Porte City.
Meyers, Joseph Henry		Templeton.
	B. Agri., Iowa Agricultural College.	
Morgan, Vester		Kellogg.
Murphy, Charles William		Dubuque.
Naughton, John P.		Parnell.
	B. S., Northern Indiana Normal.	
Newbold, Willis Boyd		Hillsboro.
O'Callaghan, Robert Emmett		Des Moines.
O'Connor, Frank Aloysius		Lawler.
O'Connor, Maurice		Missouri Valley.
	B. Di., Western Normal College.	

*Died Nov. 11, 1897.

NAME.	DEGREE.	RESIDENCE.
Penrose, Harry		Shellsburg.
Plum, William Milton		Shelby.
Popham, R. G.		Williamsburg.
	A. B., State University of Iowa.	
Price, George Milnes		Iowa City.
	Ph. B., State University of Iowa.	
Resser, Burt C.		Perry.
	A. B., State University of Iowa.	
Rollins, Richard Russell		Des Moines.
	B. S., Amherst College.	
Rominger, Joseph Ambrose		Bloomfield.
Sharp, Edward Floyd		Dexter.
Shure, William Henry		Page, N. D.
Skewis, Edward John		Inwood.
Smith, William Avery		Toledo.
	B, S., Western College.	
Spensley, Robert Waller		Dubuque.
Swords, George William		Iowa City.
Tyer, Henry Wilbert		Perry.
	B. S., Iowa College.	
Wagner, Henry Franklin		Sigourney.
Warner, Thomas Farnsworth		Iowa City.
	Ph. B., Upper Iowa University.	
Watkins, Samuel R.		Iowa City.
	Ph. B., State University of Iowa.	
Watt, Walter Gilmore		Cedar Rapids.
	A. B., Coe College.	
Weed, Howard Tobey		West Union.
Welty, Bert B.		Colo.
	B. Di., Iowa State Normal.	
Williams, Joe		Williamsburg.
Wyckoff, Clarence Stanton		Cincinnati.
	B. S., Amity College.	
Youker, DeWitt Talmage		Rockwell.

JUNIOR CLASS.

NAME.	DEGREE.	RESIDENCE.
Adams, Davis Rankin		Nora Springs.
Ainsworth, Fanny Louise		West Union.
Allen, Charles Herbert		Scranton.
Ammons, Charles Ross		Seymour.
Anderson, Fannie Parker		West Union.
Anderson, Joseph Robert		Keokuk.
Anderson, Robinson Gregg		West Union.
	B. L., Upper Iowa University.	
Anundsen, Arthur Fernando		Decorah.
Baker, George B.,		Iowa City.
Balle, Julius Edinger		Denison.
Barker, William Lloyd		Cresco.
Barner, Fred Irvin		Cedar Falls.
	B. Di., Iowa State Normal.	
Belsheim, Gullik Henry		Leland.
Blackburn, Arthur		Cresco.
Brown, Lieutellas		Monmouth.
Brown, Samuel Joe		Ottumwa.
Buggy, James Bernard		Waukon.
Bulman, Walter Washington		Waukon.
Burrows, James Sidney		Keokuk.
Carpenter, Arthur Edward		Columbus Junction.
Coldren, Paul Alfred		Iowa City.
Condon, Maurice Francis		New Hampton.
Cooper, Francis Augustine		Davenport.
Crans, Norman Wallace		Davenport.
Crary, Archie West		Boone.
	B. S., Cornell College.	
Crary, Charles Judson		Lafayette, Ind.
Crary, Samuel Delos		Mapleton.
Davidson, Thomas Jefferson		Marengo.
Dennis, Edward Swain		Red Oak.
Diamond, John Daniel		Cedar Falls.

NAME.	DEGREE.	RESIDENCE.
Dickinson, Lester Jesse		Danbury.
Dilley, Wesley Young		Hawarden.
	Ph. B., Cornell College.	
Douglas, Charles Lew		West Branch.
Edson, John Truman		Blaine.
Ely, Hanson Edward		Iowa City.
	United States Military Academy.	
Erickson, Christian		Inwood.
Eustis, Carl		Stuart.
Fairall, Harry W.		Iowa City.
Farber, Edwin U.		Davenport.
Fee, Thomas Grant		Centerville.
Fehr, Elmer Lincoln		Oakland.
Flynn, Leo James		Dubuque.
Frailey, Joseph Robinson		Fort Madison.
French, Remington Fred		Independence.
Gould, William Edwin		Quasqueton.
Gulliver, Charles Thomas		Charles City.
Hackler, Charles Wesley		Grinnell.
	A. B., Iowa College.	
Haddock, Paul Stewart		Bedford.
Hagander, Oscar William		Keokuk.
Hall, James Frank		Eddyville.
Hampson, Frank Christopher		Osage.
Hanley, Joseph Rhodes		Muscatine.
Harrington, Timothy P.		Rowan.
Havner, Horace Moore		New York.
Hays, Charles Rolvin		Norfolk, Neb.
Hoag, Lindley Murray		Iowa Falls.
Holbert, Anna Catharine		Iowa City.
Hollingsworth, Frank		Perry.
Holly, William Richard		Meriden.
Huebner, Charles Frederick		Iowa City.
	Ph. B., State University of Iowa.	

NAME.	DEGREE.	RESIDENCE.
Johnson, Elmer Augustus		Chester.
Keeler, Wilfred Cecil		Des Moines.
	Ph. B., State University of Iowa.	
Kennedy, George Washington		Montrose.
Korf, Henry Christopher		Newton.
Lehr, Andrew G.		Tyndall, S. D.
	B. L., University of South Dakota.	
Long, Will Ira		Newton.
Luken, Fernando		Oskaloosa.
	B. L. Oskaloosa College.	
Lynch, Thomas Finn		Barnum.
McBeth, Robert		Keosauqua.
McCarty, Thomas Francis		Walnut.
McCord, Robert Leigh		Lake City.
	A. B., State University of Iowa.	
McKee, John William		Conesville.
Macomber, Charles Coombs		Carroll.
	Ph. B., The University of Chicago.	
Mattison, George Eaton		Clinton.
Metcalf, Oren Jay		Vinton.
Millen, Emmor Henry		Earlville.
Miskimins, Sidney Irwin		Baxter.
Mitchell, Oliver Holmes		Vinton.
Moothart, John Solomon		Primghar.
Morrison, Samuel Turner		Iowa City.
Muckell, Francis Lewis		Dubuque.
Munger, Robert Howe		Sioux City.
Noel, Fred William		Iowa City.
Oliver, Daniel C.		Onawa.
O'Neil, Bernard Thomas		Big Rock.
Paisley, Albert Alexander		Iowa City.
	A. B., State University of Iowa.	
Patterson, George E.		Algona.
Peck, Paul		Council Bluffs.
	A. B., Iowa College.	

NAME.	DEGREE.	RESIDENCE.
Phillips, Leon Paul		Volga City.
Piersol, George Judson		Rockwell.
	Ph. B., Iowa College.	
Reiley, Robert Le Roy		Wapello.
	A. B., Knox College.	
Rigby, Elsie Miles		Mt. Vernon.
	A. M., Cornell College.	
Roberg, Richard		Decorah.
Rohde, Carl Adolph		Davenport.
Sargent, Amor Hartley		Grundy Center.
	Ph. B., Iowa College.	
Shaver, Bird Alexander		Red Oak.
Sheuerman, Jake L.		Des Moines.
Showalter, Daniel Lynn		Brainard, Neb.
Smith, Edward A.		Omaha, Neb.
Smith, Ralph J.		Iowa City.
Sperry, Edward Smith		Hamburg.
Swisher, Leonard Alonzo		Iowa City.
Talbott, Mina G.		Carroll.
Taylor, James Arthur		Bloomfield.
	B. S., Southern Iowa Normal.	
Temple, William Nathaniel		Osceola.
	A. B., Iowa College.	
Thompson, Leon Lewis		Waverly.
	B. S., Upper Iowa University.	
Thorn, Clifford J.		Washington.
	A. B., Boston University.	
Threlkeld, Delman		Chariton.
Tracy, Hayden Kenney		Cedar Rapids.
Turner, Earl James		Manson.
	B. D., Iowa State Normal.	
Underwood, Mount Vernon		Jesup.
Van Wagenen, Frank		Alexandria, S. D.
Walker, Gerald Griffin		Waverly.

NAME.	DEGREE.	RESIDENCE.
Weaver, Abram Cuthbert		Colfax.
Webber, John Francis		Ferris, Ill.
Weed, Fredinand Casson		Corning.
Westrope, Norman Scott		Harlan.
Wheelock, Thurlow Morris		Moline, Ill.
White, Arthur Wellesley		Vinton.
	B. D., Northern Indiana Normal.	
White, Lawrence James		Marengo.
Williams, Augustus Burnside		Ottumwa.
Williams, Keota W.		Ottumwa.
Willing, William Arthur		Northwood.
Willoughby, Hugh A.		Grundy Center.
Witt, Fred Henry		Ottawa, Ill.
Work, Emmet Alexander		Ottumwa.
	A. B., Iowa Wesleyan University.	

MEDICAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Abegg, Henry Hervy	Iowa.	A. K. Berry.
Adams, Fred L.	"	A. J. Morgan.
Allen, Frank Hervy	"	G. H. Cassidy.
Anderson, Frederick Eugene	"	W. D. Middleton.
Arent, Asaph	"	Francis E. Seymour.
Besore, Walter McKay	"	J. E. Conn.
Bean, Oley G.	"	S. J. Nelson.
Blake, Charles Wesley	"	W. M. Young.
Bossingham, Ottmer N., D. V. M.	"	A. Beane.
Bowen, Jesse William	"	L. W. Littig.
Briggs, Walter Homer, B. Did.,	"	Faculty.
Campbell, Charles Harvey	Nebraska.	S. O. Whaley.
Detchon, Hugh Smith	Iowa.	A. R. Leath.
Ely, Francis Argyle	"	D. D. and R. R. Davisson.
Engle, Harry Perry	"	Perry Engle.
Farrell, Albert Martin	"	F. E. Seymour.
Fitz, George G.	"	Faculty.
Frank, George W.	"	Charles Burwald.
Fuchs, Adele Matilda	"	Agnes Eichelberger.
Gardner, John Raphal	"	Faculty.
Gilkes, William	"	Faculty.
Habenicht, Robert H.	"	Faculty.
Hoxie, Will E.	"	D. G. Hoxie & J. W. Harriman.
Hull, John Franklin	"	J. C. Shrader.
Jorgensen, Palle Peder Marius	"	James Murphy.
Kearney, Charles Atwell	"	A. H. Blocklinger.
Knudson, Becker Christian	"	R. J. Nestor.

NAME.	RESIDENCE.	PRECEPTOR.
Lambert, Fred Ernest	"	A. J. Hobson.
Lester, Harry Sumner	"	Faculty.
McClintock, John Thomas, B. A.	"	R. E. Conniff.
McIntosh, J. Drusie	"	A. D. King.
Mecum, John Warren.	Wisconsin.	Faculty.
Mereness, Herbert Dayton	Iowa.	C. Brown.
Morgan, Samuel Lewis	"	M. H. Waplia.
Moulton, Milo Willie	"	A. M. Avery.
Nass, Hildus Augustinus O.	"	E. H. Williams.
Neely, Abner Dale	"	Faculty.
Noe, Charles Fred	"	C. J. Winzenried.
Parker, Ralph H.	"	P. J. Barry.
Parker, William Gilman	Oregon.	A. W. and C. S. Bowman.
Pence, Lawrence Waldo, B. Did.	Iowa.	N. W. Phillips.
Purcell, Bert	"	C. S. Chase and H. P. Duffield.
Replogle, Jerry Allan	"	Faculty.
Richards, James Weldin	"	J. W. Morgan.
Rogers, Claude Bernard	"	R. A. Rogers.
Sackett, Claude Conwell	"	A. K. Berry.
Snyder, John Franklin	"	S. R. Cook.
Stover, Emery Ellsworth	"	A. Folsom.
Stull, Will H.	"	Faculty.
Thielen, Michael H., M. Did.	"	Faculty.
Thornton, Albert H.	"	W. W. Beam.
Walker, James C.	"	Faculty.
Walker, Frederick Earl	"	J. L. Augustine.
Willsey, Frank Brown	Illinois.	Faculty.
Wright, Charles Edward	Iowa.	C. C. Smead.

JUNIOR CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Macy, Otto E.	Iowa.	J. P. Mullin.
Sigworth, Harry S.	"	H. W. Sigworth.

SOPHOMORE CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Adams, Ortus Fuller	Iowa.	Faculty.
Alford, Edward True, Ph. G.	"	C. S. Chase.
Anderson, Mannie Florine, D. D. S.	"	Faculty.
Augustine, Grant	"	J. L. Augustine.
Bachman, Morris Piper	"	J. L. Heries.
Barker, James Archie, B. Di.	"	C. C. Heady.
Binford, William Sherwood	"	G. W. Padgham.
Bowes, John Joseph	"	F. J. Will.
Bright, Henry F.	"	C. E. Leithead.
Brown, Hadley Cyprian	"	I. C. Brown.
Clark, Orson Whitney	"	O. Clarke.
Cook, Jesse Lee	"	F. E. Cook.
Cooper, Dean Gordon, D. V. S.	Iowa.	F. H. Farrington.
Copeland, John Albert	"	J. B. Kessler.
Corsant, James Colvan	"	W. S. Burrows.
Creel, James Cleon	"	J. W. Lander.
Deters, Willie August	Minnesota.	Faculty.
Dotson, Eli E.	Iowa.	J. K. Milbourne.
Freeman, John Peter	"	C. A. Hurd.
George, Abel Benson	"	A. Carson.
Gray, Howard D.	"	P. Engle.
Greenlee, Clyde Vernie	"	D. D. Drennan.
Henderson, Archibald G.	"	Faculty.
Hildreth, Herman Lee	"	J. E. and E. L. Gilmore.
Hohenschuh, Frank Adam	"	Faculty.
Hollenbeck, Hubert Lewis	"	L. J. Adair.
Ickes, Lawrence James	"	A. W. Bowman.
Johnson, George Monroe, Ph. B.	"	G. O. Johnson.
Lamerton, William Edward	"	F. Horton.
Lenz, Joseph Alvin, Ph. G.	"	Faculty.
Luehrsmann, Barney	"	Faculty.
McFall, Edward Augustus	"	Faculty.
Martin, Ernest Edwin	"	Faculty.
Meis, Edward William	"	N. J. A. Mueller.

NAME.	RESIDENCE.	PRECEPTOR.
Meyhaus, John Henry	Iowa.	A. D. Hageboeck.
Morris, Thomas Boyd, Ph. B.	"	Faculty.
Neff, Mary Lawson, A. B.	"	Faculty.
Newell, William Carl	"	W. Abegg.
Osborn, Claude Fenton	"	Faculty.
Ostrom, Louis, Jr., A. B.	Illinois.	Faculty.
Patterson, William Edward	Iowa.	Jas. Murphy.
Payne, Rollo O.	"	Faculty.
Reiter, Alfred E.	"	H. F. Steinle.
Rice, Perry Flint	Illinois.	Faculty.
Roberts, Ernest Eugene	Iowa.	J. W. Lander.
Sargent, Frank Loring, Ph. G.	"	G. E. Fullerton.
Sears, George L.	"	Faculty.
Sigworth, Fred Byers	"	H. W. Sigworth.
Sloan, Arthur Neely	"	R. E. Conniff.
Smith, Ralph Thaddeus	"	M. N. McNaughton.
Stuart, Percy Ernest	"	A. W. Adair.
Thompson, James Raymond	"	C. B. Allen.
Tilden, Charles George	"	W. E. Harriman.
Torney, Samuel James, M. Did.	"	Faculty.
Van Gorden, Jesse Leland	"	J. C. Davies.
Wagner, George Alexander	"	M. M. Meredith.
Weir, Edward C.	"	A. Weaver.
Wells, Seth M.	"	Faculty.
Williams, Edward B.	"	Faculty.
Wright, Charles Alfred	"	J. R. Sifton.
York, Nathan Albert	"	Faculty.

FRESHMAN CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Ainsworth, Willard Charles	Iowa.	E. W. Haradon.
Beach, Lena Alice	"	Faculty.
Beach, Melville Augustus	"	Faculty.
Belsheim, Andrew Gilbert	"	G. G. Belsheim.
Bennett, Henry Sumner	Illinois.	Faculty.

NAME.	RESIDENCE.	PRECEPTOR.
Blackmore, Ralph Davis	Iowa.	E. L. Blackmore.
Brundage, Myron	"	Faculty.
Bullock, William Elmer	"	G. H. Cassidy.
Cantonwine, Eutellus Augustus	South Dakota.	Faculty.
Cantwell, John Dalzell	Iowa.	A. W. Cantwell.
Cook, James Orlando	Illinois.	W. O. Beam.
Chapman, Henry S.	Iowa.	Faculty.
Cretzmeyer, Charles H.	"	W. A. Rohlf.
Daly, Maud	"	Faculty.
DeLespinasse, Adolph Frederick H.	"	J. F. DeLespinasse.
Dennert, Frank	"	J. R. Guthrie.
Denney, Alden Ray	"	Faculty.
Donohoe, Anthony P.	"	Jas. Murphy.
Ekblad, William, A. B.	Kansas.	Faculty.
Fairchild, Reuben Joel	Illinois.	J. S. Whitmire.
Fitzpatrick, Dennis Francis	Iowa.	Jas. Murphy.
Frank, Carl Schurtz	"	J. C. Wilson.
Gifford, Andrew James	South Dakota.	W. H. Lane.
Gaines, Daniel	Iowa.	Faculty.
Gorham, Amy Margaret	Minnesota.	Faculty.
Hall, Elmo Allen	Iowa.	Faculty.
Harlan, Charles D.	"	J. C. Williams.
Heilman, Ernest Samuel	"	E. C. Heilman.
Hender, Alfred Baker	"	W. D. Middleton.
Hess, William Clarence	"	Faculty.
Hews, Lewis DeWitt	"	R. H. Hews.
Hibbs, Fred Valentine	"	W. W. Chatterton.
Hobbs, Samuel Warren, Ph. B.	"	Faculty.
Hobby, Edwin Elmer	"	C. M. Hobby.
Jarvis, Fred Jackson	"	Faculty.
Johnson, Frank George	"	M. B. Coltrane.
Kemmerer, Theodore Wilbert	"	C. T. Kemmerer.
Kenner, Joseph J.	Missouri.	S. M. Green.
Krejsa, Oldrich	Iowa.	Faculty.
Laughead, John Samuel	"	W. W. Syp.
Lofgren, Emil	Illinois.	B. C. and S. L. Anderson.

NAME.	RESIDENCE.	PRECEPTOR.
Logan, Fred Wallace	Iowa.	E. E. Munger.
Logan, Jay Augustus	Illinois.	Faculty.
Long, Henry Shively	Iowa.	Faculty.
Long, Ulysses Preston	"	Faculty.
Lovewell, John Hubert	Missouri.	Faculty.
Lowry, James David	Iowa.	R. Evans.
Luckey, George Miller, B. A.	Illinois.	Faculty.
McCall, Harry Kenyon	Iowa.	Faculty.
Meadows, Lawrence Harland	"	Faculty.
Meigs, Benjamin Lyle	"	W. A. Chapman and C. V. Artz.
Middleton, Edward Duncan	"	W. D. Middleton.
Middleton, George McClellan	"	W. D. Middleton.
Morgan, Charles Henry	"	A. W. Adair.
Morton, Lewis Burrows	"	W. M. Morton.
Overholser, John D.	"	Faculty.
Peterson, August John	Iowa.	Faculty.
Pence, Roy William	"	Faculty.
Plumer, Lee Elmer	"	Faculty.
Pringle, Jesse	"	L. A. Rogers.
Puleston, Fred	"	A. G. Hejinian.
Ramsey, Guy	"	Jas. Murphy.
Rentz, Charles Bernard	"	E. A. Doty.
Ridenour, Joseph Elmer	"	Faculty.
Sailor, Edwin Allen	"	Faculty.
Schultze, Frederick Pitte	Iowa.	W. C. Schultze and E. F. Clapp.
Schroeder, William	"	J. F. McCarthy.
Sears, Edwin	Illinois.	Faculty.
Shaw, Robert H.	"	Chas. Lanning.
Sheldon, Benjamin L.	Iowa.	Faculty.
Smith, Lizzie	"	Faculty.
Starr, Charles Freeman	"	Faculty.
Stober, Alvin Martin	"	Faculty.
Speers, Will Frederick	"	C. C. Griffin.
Stanley, Clarence J., B. S.	"	J. S. Love.
Wescott, Leroy Anderson, M. Did.	"	A. F. Walters.

NAME.	RESIDENCE.	PRECEPTOR.
Wheat, Fred Calwell	Iowa.	Faculty.
Wright, Howard Jesse	"	Faculty.

SPECIAL STUDENTS.

Habenicht, Ida Adella
Mason, Walter Milton
Teeters, Wilber John, B. S., Ph. C.
Tourtellot, Lewis Jamison

HOMOEOPATHIC MEDICAL DEPARTMENT.

SENIOR CLASS.

NAME.	PRECEPTOR.	RESIDENCE.
Bailey, Ida H.	J. G. Gilchrist,	Iowa City.
Coleman, Jennie	George Royal,	Des Moines.
Farnum, Earl P.	A. T. Huxley,	Mason City.
Kauffman, Wm. A.	C. M. Morford,	Whitton.
Lambert, Elmer J.	J. C. Bonham,	Ottumwa.
Sarchett, Llyod H.	F. L. Tribon,	Algona.
Skinner, Fred C.	F. D. Paul,	Rock Island, Ill.
Todd, Victor C.	S. N. McLean,	Washington.

JUNIOR CLASS.

NAME.	PRECEPTOR.	RESIDENCE.
Abbott, Ed. C.	J. G. Gilchrist,	Iowa City.
Blackstone, B. P.	A. L. Pollard,	Anamosa.
Calkins, Fred E.	R. W. Calkins,	Clarks, Neb.
Carver, H. E.	Faculty,	Oskaloosa.
Davis, Metta E.	C. B. Adams,	Sac City.
Marble. Pearl L.	Thos. Phillips,	Raymond.
McCabe, Fordyce	A. C. McAllister,	Muscatine
Metzinger, John J.	Faculty,	Iowa City.
Unkrich, C. Rudy	W. H. Connor,	Fairfield.
Young, Glyndon A.	J. Hermann,	Sioux City.

SOPHOMORE CLASS.

NAME.	PRECEPTOR.	RESIDENCE.
Alexander, J. L.	Drs. Morhead and Muirhead,	Marion.
Barton, E. G.	Faculty,	Mt. Pleasant.

NAME.	PRECEPTOR.	RESIDENCE.
Bickley, W. H.	Drs. Bickley.	Waterloo.
Bower, C. A.	A. Zolner,	West Union.
Carmichael, E.	J. G. Gilchrist,	Richland.
Coddington, J. K.	Faculty.	Princton, Ills.
Eilers, P.	W. A. Mirrick,	Monticello.
Evenson, Geo. A.	C. F. Bennett,	Finchford.
Hill, Alice L.	J. G. Gilchrist,	Epworth.
Howe, Marion A.	Faculty,	Des Moines.
Johnstone, J. U.	F. A. Strawbridge,	Sigourney.
Kemp, E. H.	C. M. Morford,	Toledo.
Laird, J. W.	Faculty,	Mt. Pleasant.
Lenz, J. G.	J. G. Gilchrist,	Cedar Rapids.
Linn, W. N.	A. M. Linn,	Des Moines.
McGarvey, Anna M.	J. L. Vandervere,	Blue Grass.
Mitchell, F.	B. A. Wilder,	Sibley.
Rorabaugh, W. E.	Geo. Royal,	Des Moines.
Schenck, E.	F. C. Sage,	Waterloo.
Tucker, F. A.	I. H. Fry,	Marshalltown.
Waterbury, C. A.	Drs. Bickley,	Waterloo.
Winters, Rose De L.	J. G. Gilchrist,	Epworth.

FRESHMAN CLASS.

NAME.	RESIDENCE.
Anderson, George W.	Dysart.
Babcock, Elmer	Eldora.
Blessin, Otto	Eldorado.
Cross, George B.	Nashua.
Dameron, James L.	Iowa City.
Hubbard, Chester	Cedar Rapids.
Kauffman, Edward C.	Estherville.
Kauffman, Ira D.	Whitten.
Launder, Frank T.	Orient.
Little, Lowell	Stromsburg, Nebr.
Martin, Hobart E.	Boone.

NAME.	RESIDENCE.
Maxwell, Adeldert B.	Ames.
Musgrove, George J.	Farmington.
Parsons, Percy L.	Traer.
Pond Issi Otto	Gladbrook.
Richards, Frank O.	Iowa City.
Sarchett, Geo. A.	Algona.
Snitkay, Chas. J.	Tipton.
Swallum, James A.	Carroll.
Wenzelick, George J.	Iowa City.
Wilkinson, Landy A.	Hedrick.
Winters, Louis E.	Hampton.

NURSES.

HEAD NURSES.

NAME.	RESIDENCE.
Jensen, Cecilia A.	Osage.
Raff, Mary A.	Maquoketa.

SENIORS.

Graves, Sara L.	Dubuque.
Hawkins, Alice	Des Moines.

JUNIORS.

Smith, Carrie E.	Iowa City.
Waite, Carrie I.	Wellman.
Williamson, Elizabeth	Ladora.

PUPIL NURSES.

Blanck, Mae Ellen	Walker.
Moore, Mary P.	Mt. Vernon.

Anderson, Ida Sophia	Iowa City.
Blowers, Hannah M.	Iowa City,

NAME.	RESIDENCE.
Carmichael, Mrs. E.	Iowa City.
Ernst, Alice B.	Iowa City.
Gibson, Mary L.	Iowa City.
Hofeditz, Mary	Iowa City.
Hulsebus, Elizabeth	Burlington.
Lenz, Ada	Iowa City.
Linn, Retta	Des Moines.
Myers, Milfred	Rockford, Ill.
Needer, Emma	Iowa City.
Phelps, Jennie L.	Martinsburg.
Safley, Agnes J.	Tipton.
Walker, Lucy Mabel	Iowa City.
Walker, Minnie M.	Iowa City.

DENTAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.
Barrera, Isaac	Porfirio, Mexico.
Beam, Frank N.	Moorland.
Bingham, Frederick Nathaniel	Des Moines.
Bradley, William Oscar	Dubuque.
Brock, Herbert Bruce	Lone Tree.
Brooks, George	Greenfield.
Brown, Sim Chauncey	Eddyville.
Brown, Curtis Henry	Iowa City.
Calhoun, Joseph Farrar	Birmingham.
Crandall, Walter G.	Spencer.
Countryman, Charles Clarence	Birmingham.
Davis, Walter A.	Aledo, Ill.
Daugherty, James Bertis	La Moille, Ill.
Decker, Herbert M.	Davenport.
Deetkin, Julius Charles	Council Bluffs.
Dillinger, Hanna	Glidden.
Eickelberg, George C.	Waterloo.
Eicher, Cora L.	Ainsworth, Nebr.
Fawkes, Charles James	Dubuque.
Fickes, Josiah Barton	Iowa City.
Gable, John Carleton	Anamosa.
Gary, Arthur George	Walker.
*Gay, John Charles	Conesville.
Grafton, Charles W.	Packwood.
Godlove, George W.	Riverside.
Hall, Robert W.	Cherokee.

* Not in attendance.

NAME.	RESIDENCE.
Hayes Clinton LeGrande	La Porte City.
Haley, Frank Richardson	New York, N. Y.
Henle, Mathias Francis	N. Clinton.
Hirons, Jennie	Princeton, Mo.
Hollenbeck, Charles Dighton	Cedar Rapids.
Hood, Guerne Tuttle	Dunlap.
Hope, Bird Norris	Birmingham.
Johnson, Frank Alexander	Holsteen.
Joslin, Walter Trich	Moline, Ill.
Keeler, Howard Denton	Des Moines.
Kinsley, Jason Daniel	McGregor.
Lambert, Nelia M.	Springgeld, Ill.
Lawton, Ernest John	North Freedom, Wis.
Leech, Charles Sloan	Winterset.
Leigh, Charles Lloyd	Dyersville.
Lillibridge, William Otis	Akron.
Lindalay, Clayton Burns	Waucoma.
McKee, J. W.	Davenport.
McClelland, Freeman	Cedar Rapids.
McClanahan, William B.	Cincinnati.
Meis, Herman J.	Dyersville.
Miller, William C.	Kalona.
Morrow, Burton Allen	Larrabee.
Ogg, Mahlon D.	Greenleafton, Minn.
Patton, Jefferson Hollister	Des Moines.
Read, William M.	Allerton.
Reynard, May	Burlington.
Rice, James Kinlon	Amelia.
Rundorff. Arthur Henry	Burlington.
Sensibaugh, William Chandler	Mt. Pleasant.
Starbuck, Albert W.	Springdale.
Sutton, Harry Burse	Corydon.
Tinker, E. Fay	Wheatland.
Torrance, Charles Anderson	Maryville, Mo.
Truax, Fred Elmer	Maquoketa.
Webb, John Everett	McGregor.

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Weickert, William Henry	Fairfield.
Wells, Frederick	Fairfield.
Weymouth, Ida	Iowa City.
Wood, George L.	Geneseo, Ill.

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NAME.	RESIDENCE.
Alderson, Thomas E.	Dubuque.
Albright, Leroy Clark	Primghar.
Baker, Harry Clark	Everly.
Baumer, John	Iowa City.
Booth, John Jacob	Marion.
Bradshaw, Wayland C.	Jefferson.
Browning, Ernest Welcomb	Solon.
Bruce, Guy Rolfe	Dubuque.
Burtchby, F. T.	Montezuma.
Davis, John Clarence	Mt. Vernon.
Gardner, H. H.	Iowa City.
Goodenough, G. H.	Gowrie.
Gray, Lewis Ballou	Bancroft.
Grigsby, Fred Redman	Blandinsville, Ill.
Hallett, J. A.	Des Moines.
Hannofin, T. L.	Cedar Rapids.
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Keeler, Clark C.	Des Moines.
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Lockhart, Will T.	Mediapolis.
Long, John Edwin	Mt. Pleasant.
Lowry, William David	Davenport.
McGarvey, Lovelace Edwin	Davenport.
Mentzer, Charles	Robbins.
Morris, Robert C.	La Platte, Mo.
*Moore, Rolland B.	Iowa City.

*Irregular.

NAME.	RESIDENCE.
Oyler, William Seward	Downey.
Page, Robert Roy	Iowa City.
Pray, Charles H.	Vinton.
Peek, L. S.	Normal, Ill.
*Ridenour, Judson, Beeghly	Garrison.
Roberts, Claire Willie	Mt. Pleasant.
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Brockway, F. L.	Jefferson.
Brown, Esther	Staceyville.
Cheesbro, M. D.	Shell Rock.
Clarke, A. D.	Charles City.
Dessaint, L. R.	Davenport.
Devarney, W.	Lake Mills.
Dexter, C. J.	Rockwell.
Eller, C. A.	Pekin.
Fairall, J. A.	Des Moines.
Gibford, H.	Newton.
Gore, F. A.	Riverton.

* Deceased.
† Irregular.
‡ Not in attendance.

NAME.	RESIDENCE.
Gothard, S. B.	Atlantic.
Griffis, T. R.	Carson.
†Goodenough, G. D.	Gowrie.
Hall, E. A.	Reinbeck.
Hasek, A.	Cedar Rapids.
Holson, Alliene	Iowa City.
Holson, E. R.	Iowa City.
Kenderdine, W. H.	Spencer.
Knowles, A. C.	Winthrop.
Kuster, S. W.	Caledonia, Minn.
McCartney, O. E.	Thurman.
Mentzer, J. A.	Robbins.
Meves, O. C.	Wheatland.
†Moore, R. B.	Iowa City.
Overholt, T. E.	Iowa City.
Parsons, D. C.	Traer.
Rathbone, R. R.	Red Oak.
Reppert, L.	Muscatine.
Robeson, Mary	Moline, Ill.
Safford, Margaret L.	Hamilton, Ill.
Seiler, Agnes	Muscatine.
Shannon, R. B.	Milledgeville, Ill.
‡Stewart, J. F.	Kellogg.
†Swisher, A. R.	Iowa City.
Taylor, M. H.	Geneseo, Ill.
Thompson, D. L.	Corning.
Vorwald, T.	Dubuque.
Will, R. T.	Glenwood.

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McClelland, Freeman, D.D.S.	Cedar Rapids.

†Irregular.
‡Not in Attendance.

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Brinton, Gilbert Edward	Brighton.
Buss, Frederic John	Hammond, N. Y.
Gearhart, Newton Arthur	Hopkinton.
Nixon, Robert Burns	Shambaugh.
Owens, David Austin (Special)	Cresco.
Park, Charles Grant	Wilton.
Prader, Dolph C.	Monticello.
Tague, Marion Samuel	Vinton.
White, Louis Mortimore	Maynard.

JUNIOR CLASS.

NAME.	RESIDENCE.
Adam, William Charles	Volga.
Ashford, George Washington	Homer, Neb.
Barr, Henry James	Vinton.
Benham, Lewis Albert	Shelby.
Carney, Edward Holland	Cedar Falls.
Conry, William LeRoy	Waterloo.
Dabney, Maurice John	Oakland,
Delaney, Jerry C.	Milligan, Neb.
Doran, John William	Durant.
Dorgeloh, Henry	Anamosa.
Dyhr, William	West Branch.
Heston, Harry	Atalissa.
Hieber, Harvey George	Cedar Falls.
Junger, William Fred	Reinbeck.

NAME.	RESIDENCE.
LeFevre, Louis Kountz	Montrose.
McGuan, Charles	Iowa City.
McPheeters, Ben Brown	Jefferson.
Mittvalsky, Edward Charles	Cedar Rapids.
Nebergall, George N.	Davenport.
Nichols, Fred Claudius	Green Mountain.
Phillips, Amy Drake	Fertile.
Reburn, William Warren	New Albin.
Schaumloeffel, Marie Berenice	Ravenwood, Mo.
Schnier, John Valentine	Worthington.
Strayer, Lucile I.	Waterloo.
Swan, Wallace Cantwell	Morning Sun.
Updegraff, Simon L.	Hedrick.

SUMMARY.

COLLEGIATE DEPARTMENT:

Graduate Students	88
Seniors	81
Juniors	110
Sophomores	147
Freshmen	180
Special	67—673

LAW DEPARTMENT:

Seniors	101
Juniors	116—227

MEDICAL DEPARTMENT:

Seniors	55
Juniors	2
Sophomores	61
Freshmen	78
Special	4—200

HOMŒOPATHIC MEDICAL DEPARTMENT:

Seniors	8
Juniors	10
Sophomores	22
Freshmen	22
Nurses	24— 86

DENTAL DEPARTMENT:

Seniors	66
Juniors	45
Freshmen	40
Practitioner	1—152

PHARMACY DEPARTMENT:

Seniors	9
Juniors	27— 36
	1374
Deduct for names counted twice	61
	1313

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J. J. CROSSLEY, C. '91.....Winterset

Railroad Secretary:

S. K. STEVENSON, C. '93.....Iowa City

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NEW SERIES VOL. I. NO. 3.

BULLETIN

OF THE

UNIVERSITY OF IOWA

MAY 15, 1899

IOWA CITY, IOWA

Application made for Entry at the Post Office as Second Class Matter.

CATALOGUE

OF THE

STATE UNIVERSITY OF IOWA

IOWA CITY, IOWA

1898-99

AND

ANNOUNCEMENT FOR 1899-1900

PUBLISHED BY THE UNIVERSITY
1899

CALENDAR FOR 1899 - 1900.

1899.

June 2, Friday.—Anniversary of Literary Societies, 8 P. M.

June 4, Sunday.—Baccalaureate Address, 4 P. M.

June 5, Monday.—Class Day Exercises.

Commencement, Dental Department.

Battalion Drill and Dress Parade, 4 P. M.

June 6, Tuesday.—Alumni Day.

Alumni Meeting, 2 P. M.

Alumni Dinner, 6 P. M.

June 7, Wednesday.—Commencement, Law Department, 10 A. M.

June 8, Thursday.—Commencement, Collegiate Department, 10 A. M.

September 12, Tuesday.—Examinations for Admission.

September 13, Wednesday.—Fall Term begins, all Departments.

November 23, Thursday.—Thanksgiving Holiday.

December 21, Thursday.—Fall Term ends.

1900.

January 3, Wednesday.—Winter Term begins.

March 22, Thursday.—Winter Term ends.

March 27, Tuesday.—Spring Term begins.

March 27, Tuesday.—Commencement, Homœopathic Medical Department.

March 28, Wednesday.—Commencement, Medical and Pharmacy Departments.

June 1, Friday.—Anniversary of Literary Societies, 8 P. M.

June 3, Sunday.—Baccalaureate Address, 4 P. M.

June 4, Monday.—Class Day Exercises.

Commencement, Dental Department.

June 5, Tuesday.—Alumni Day.

Alumni Meeting, 2 P. M.

Alumni Dinner, 6 P. M.

June 6, Wednesday.—Commencement, Law Department, 10 A. M.

June 7, Thursday.—Commencement, Collegiate Department, 10 A. M.

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---

* Died September 23, 1898.
† Died October 26, 1898.

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* Absent on leave.

† Absent on leave, winter and spring terms.

BURTON S. EASTON, B. S.,
Instructor in Mathematics.

PERCY LEWIS KAYE, A. M., PH. D.,
Instructor in History.

WILLIAM O. FARNSWORTH, A. M.,
Instructor in French.

WILLIAM ROLLA PATTERSON, PH. D.,
Instructor in Statistics and Economics.

CLARENCE WILLIS EASTMAN, PH. D.,
Instructor in German.

GEORGE SCHUYLER SCHAEFFER, A. B.,
Instructor in Military Science and Tactics.

FRED ALLISON HOWE, A. B., LL. B.,
Instructor in English.

JOSEPH H. RIDGWAY,
Taxidermist.

THEODORE L. HAZARD, M. D.,
Assistant in Materia Medica in the Homœopathic Medical Department.

CHARLES G. PARK, PH. G.,
Assistant in the Pharmacy Laboratory.

ZADA M. COOPER, PH. G.,
Assistant in the Pharmacy Laboratory.

FRED J. BECKER, M. D.,
Assistant to the Chair of Surgery, Homœopathic Medical Department.

RALPH W. HOMAN, M. D.,
Assistant to the Chair of Ophthalmology, etc., Homœopathic Medical Department.

LEORA JOHNSON, M. D.,
Clinical Assistant to the Chair of Surgery, Homœopathic Medical Department.

THOMAS E. SAVAGE, M. S.
Assistant in Botany.

OSWALD VEBLEN, A. B.,
Fellow in Physics.

JOHN J. LAMBERT,
Assistant in Animal Morphology and Physiology.

HERMAN A. MUELLER,
Assistant in Geology.

FRANK N. BRINK,
Assistant in Chemistry.

JENNIE S. COTTLE,
Superintendent of Hospital, Medical Department.

ALPHEUS L. POLLARD, M. D.,
Assistant to the Chair of Obstetrics in the Homœopathic Medical Department.

JOHN T. MCCLINTOCK, A. B., M. D.,
Demonstrator of Anatomy, Pathology, and Bacteriology in the Medical Department.

BESSIE G. PARKER, PH. B.,
Assistant in the Library.

ETHEL CHARLTON, PH. B.,
Assistant in the Library.

LOUISE MOULTON, A. B.,
Assistant in the Library.

MARY A. RAFF,
Matron of the Homœopathic Hospital.

THE UNIVERSITY AND THE STATE.

THE University of Iowa is an integral part of the public school system of the State. As required by law, it begins, as far as practicable, where the high schools end, and seeks to complete the work carried through the various grades below it. A sense of this vital connection with the system of public schools determines, in large measure, its requirements of admission, its spirit and the trend of its work.

In the year 1840, the Congress of the United States passed an act setting apart two townships for the use and support of a University within the Territory of Iowa, whenever it should become a State. The gift was accepted, as set forth in the Constitution of the State, and the policy reaffirmed in the amended Constitution of 1857.

The first General Assembly took action in regard to the location of the University, and a Board of Trustees was appointed. Very little, however, was accomplished until 1855, when the institution was first opened for the reception of students. The University was subsequently reorganized, and under the new organization reopened on September 19, 1860, and this may fairly be regarded as the date of the beginning of the existing institution.

The control of the University is entrusted to a Board of Regents, consisting of the Governor of the State and the Superintendent of Public Instruction, *ex-officiis*, and one member from each Congressional District, who are elected by the General Assembly.

ORGANIZATION OF THE UNIVERSITY.

The University comprises the following departments:

1. COLLEGIATE DEPARTMENT.
2. LAW DEPARTMENT.
3. MEDICAL DEPARTMENT.
4. HOMŒOPATHIC MEDICAL DEPARTMENT.
5. DENTAL DEPARTMENT.
6. PHARMACY DEPARTMENT.

COLLEGIATE DEPARTMENT.

FACULTY AND INSTRUCTORS.

AMOS NOYES CURRIER, A. M., LL. D.,
Acting President.
Professor of Latin Language and Literature, and Dean of the Faculty.

SAMUEL CALVIN, A. M., PH. D.,
Professor of Geology.

THOMAS HUSTON MACBRIDE, A. M., PH. D.,
Professor of Botany.

LAUNCELOT WINCHESTER ANDREWS, PH. D.,
Professor of Chemistry.

GEORGE THOMAS WHITE PATRICK, PH. D.,
Professor of Philosophy.

CHARLES BUNDY WILSON, A. M.,
Professor of German Language and Literature, and Secretary of the Faculty.

ANDREW ANDERSON VEBLEN, A. M.,
Professor of Physics.

LAENAS GIFFORD WELD, A. M.,
Professor of Mathematics.

CHARLES CLEVELAND NUTTING, A. M.,
Professor of Zoology.

ISAAC ALTHAUS LOOS, A. M., D. C. L.,
Professor of Political Science.

JOSEPH JASPER MCCONNELL, A. M.,
Professor of Pedagogy.

WILLIAM CRAIG WILCOX, A. M.,
Professor of History.

FREDERIC C. L. VAN STEENDEREN, A. M.,
Professor of French Language and Literature.

ALFRED VARLEY SIMS, C. E.,
Professor of Civil Engineering.

GILBERT LOGAN HOUSER, M. S.,
Professor of Animal Morphology and Physiology.

BENJAMIN FRANKLIN SHAMBAUGH, A. M., PH. D.,
Professor of Government and Administration.

WILLIAM PETERS REEVES, PH. D.,
Professor of English Language and Literature.

LEONA ANGELINE CALL, A. M.,
Assistant Professor in charge of Greek Language and Literature.

CHARLES SCOTT MAGOWAN, A. M., C. E.,
Assistant Professor of Civil Engineering.

BOHUMIL SHIMEK, C. E.,
Assistant Professor of Botany, and Curator of the Herbarium.

HENRY F. WICKHAM, M. S.,
Assistant Professor of Zoology.

ARTHUR G. SMITH, A. M.,
Assistant Professor of Mathematics.

FRANKLIN HAZEN POTTER, A. M.,
Assistant Professor of Latin.

CARL E. SEASHORE, PH. D.,
Assistant Professor of Philosophy.

PAULINE KIMBALL PARTRIDGE,
Instructor in Elocution.

FREDERIC BERNARD STURM, A. B.,
Instructor in German.

PERCY HARGREAVES WALKER, M. S.,
Instructor in Chemistry.

GEORGE CRAM COOK, A. B.,
Instructor in English.

GEORGE N. BAUER,* M. S.,
Instructor in Mathematics.

HARRY GRANT PLUM,* A. M.,
Instructor in History.

CHARLES HENRY BOWMAN, PH. B.,
Instructor in Physics.

HERBERT C. DORCAS, PH. B.,
Instructor in Pedagogy.

LOUISE ELIZABETH HUGHES, A. M.,
Instructor in Latin.

FRED D MERRITT, A. M.,
Instructor in Mathematics.

HARRY EUGENE KELLY,* A. M.,
Instructor in English.

BURTON S. EASTON, B. S.,
Instructor in Mathematics.

PERCY LEWIS KAYE, A. M., PH. D.,
Instructor in History.

* Absent on leave.

WILLIAM O. FARNSWORTH, A. M.,
Instructor in French.

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Instructor in Statistics and Economics.

CLARENCE WILLIS EASTMAN, PH. D.,
Instructor in German.

GEORGE SCHUYLER SCHAEFFER, A. B.,
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FRED ALLISON HOWE, A. B., LL. B.,
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THOMAS EDMUND SAVAGE, M. S.,
Assistant in Botany.

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Fellow in Physics.

JOSEPH H. RIDGWAY,
Taxidermist.

JOHN J. LAMBERT,
Assistant in Animal Morphology and Physiology.

HERMAN A. MUELLER,
Assistant in Geology.

FRANK N. BRINK,
Assistant in Chemistry.

STANDING COMMITTEES OF THE COLLEGIATE FACULTY.

Executive: The Acting President, and Professors Weld, and Patrick.

Admission and Classification: Professors Weld, Wilson, McConnell, and Patrick.

Preparatory Schools: Professors McConnell, Loos, Calvin, and Houser.

Graduate Students: Professors Wilcox, Loos, Macbride, and Nutting.

Catalogue: Professors Wilson, Reeves, and Shambaugh.

Military: Professors Andrews, Weld, and McConnell.

Athletics: Professors Sims, Shambaugh, and Reeves.

Library: The Acting President, and Professors Wilson, Calvin, Nutting, and Patrick.

Rules: Professors Veblen, Calvin, and Van Steenderen.

GENERAL PLAN.

THE Collegiate Department offers four general courses of study,—one Classical, two Philosophical, and one General Scientific; and two technical courses,—Civil Engineering and Electrical Engineering, whose requirements and lines of work offered are set forth under Courses of Study.

Candidates for degrees are required to make an election of one of these courses, and will not be allowed, without permission, to change the elected course, nor to take less or more than fifteen hours of lectures or recitations per week, except as required by the program.

The President, Dean, and members of the Faculty are glad to advise with students as to courses and the choice and grouping of elective studies.

Students not candidates for graduation, on complying with the terms of admission, will be allowed to select their studies under the direction of the Faculty.

Persons over twenty-one years of age, not candidates for a degree, may be admitted to special studies, without examination, at the discretion of the Faculty.

Resident Graduates.—Graduates of this University and of other Colleges and Universities in good standing, are admitted without examination, whether candidates for advanced degrees or not, on application to the President or Dean. Graduate courses are set forth under the proper heading.

REQUIREMENTS FOR ADMISSION.

CANDIDATES for admission to the Freshman Class in any of the Collegiate courses must be at least sixteen years of age, and must, by examination or by presenting acceptable certificates, furnish evidence of having completed the preparatory requirements.

No one will be admitted whose deficiencies exceed the equivalent of four credits; a *preparatory* credit is the equivalent of one study daily for a term of twelve weeks, on the basis of three studies a day in the preparatory schools. Candidates having deficiencies not exceeding this limit may be admitted *upon condition that they complete their preparation within the first year after admission.*

It is expected that the following work will be completed in the grammar school: Practical Arithmetic, Reading, Penmanship, Orthography, English Grammar, Geography, Book-keeping (single entry), Physiology, (the statutory requirements for primary and grammar schools), United States History (three terms' work), Civil Government (one term's work), Composition (three terms' work), Drawing (three terms' work).

The work in Book-keeping, Composition, Drawing, and Civil Government is not to be considered as absolutely required, but only work in excess of the amount named in this paragraph will receive credit as preparatory work.

CLASSICAL COURSE.

GROUP I.—ANCIENT LANGUAGES.

1. **Latin.** Grammar, Cæsar (four books), Cicero (six orations), Vergil (six books) with Prosody.

Instead of the prescribed Cæsar an equivalent amount of Viri Romæ or Nepos will be accepted and is recommended to the preparatory schools. In this case the remainder of the requirements may be offered in Cæsar or Cicero. It is expected that three or four of the six required

orations of Cicero (the Catiline orations being taken as the standard of length) will be read thoroughly and the remainder rapidly with a view to securing facility in translation. Equivalents in kind will be accepted for any part of the specified requirements. *An accurate and ready knowledge of grammatical forms and construction and a good vocabulary are of essential importance.* Sight reading should be taught and practiced from the first.

Exercise in writing Latin, based upon the current reading, ought to be carried through the *entire preparatory course.* An amount equivalent to Collar, Part III, is required for admission.

Four years of daily recitation are needed for the required preparation.

The Roman pronunciation is used in the University.

2. **Greek.** Grammar, Xenophon's Anabasis. As few high schools meet this requirement, the University for the present will provide means for fulfilling it, and an equivalent of three terms' work from Group IV may be offered.

The preparatory work in Greek should give thorough knowledge of grammatical forms, familiarity with the common rules of syntax and the ability to write simple Greek prose with correct accents. It is not expected that high school pupils under ordinary circumstances will be able, in a single year, to cover thoroughly the work required for admission.

GROUP II.—MATHEMATICS.

3. **Algebra.** The Algebra of the high school should comprise a careful study of the following topics: signs and symbols; fundamental operations; factoring (including lowest common multiple and highest common divisor); fractions; simple and quadratic equations; theory of exponents (including negative and fractional exponents and radicals); progressions. Especial attention should be given to such salient points as the significance of the minus sign, factoring, theory of exponents, equations, and the ability to state readily algebraic problems. The interpretation of algebraic results with their graphical representation should be introduced at the earliest possible stage and constantly insisted upon.

4. **Geometry.** Both plane and solid geometry are required. The

"Heuristic" method in beginning the study of geometry is strongly recommended (See Hopkins' Manual of Plane Geometry, D. C. Heath & Co., and Spencer's Inventional Geometry, D. Appleton & Co).

Whatever method is used the pupil should be provided with adequate drawing instruments and should construct and verify all of his propositions and theorems. Geometric processes and results should be expressed by algebraic symbols whenever possible. Original investigations should not simply be encouraged, but should be insisted upon as a matter of course. The eminently practical side of the study of geometry should not be lost sight of, but the work should be so arranged that it may be of the highest disciplinary value. The language of all geometrical exercises should be exact.

Arithmetic. The work in arithmetic should in general be completed in the grammar grades. At least one term's work in arithmetic may be done with great profit in the high school after the completion of the required work in algebra and geometry. Not only will a general review of the subject be found beneficial in itself, but the higher point of view now attainable may be taken advantage of in many ways which it is not necessary to enumerate.

In the high school not less than one-fourth of the time for three years should be devoted to the work in algebra and geometry. It is desirable that the high school work in mathematics be not finished until the end of the course, in order that there may be no break in the continuity of the work between the high school and the University.

GROUP III.—ENGLISH AND HISTORY.

5. **English Composition.** All applicants for admission whether from accepted schools or not will be examined to test their ability to write clear and correct English. The applicant will be required to write an essay of not less than two hundred words upon a subject chosen by himself from a considerable number set before him. No applicant will be accepted who is deficient in spelling, punctuation, sentence, and paragraph structure.

The teacher is reminded that the proper preparation for this part of the requirement is constant practice in writing, with careful correction and revision of themes. A part of the time should be devoted to the study of composition in any good text-book, such as Lewis's First Book

in Writing (Macmillan) or Scott & Denney's Paragraph Writing (Allyn & Bacon).

6. **English Literature.** Throughout the high school course much attention should be paid to the study of literature, by which is meant not merely the study of a manual on the history of literature but a careful, sympathetic study of literature itself in the writings of representative authors. Entire masterpieces suited to the attainments of the class should form the basis of recitations and an equal amount of collateral reading should be assigned and written reports required.

During the last year of the course a good outline history of the literature should be used, such as Brooke's Primer of English Literature (The Macmillan Co.) or Pancoast's Introduction to English Literature (Holt & Co.) This should always, however, be subordinated to the study of the texts themselves. In the study of literature the student should be stimulated and trained not merely to read and enjoy but to analyze the style and to absorb the spirit and substance of an author.

The applicant will be expected to be familiar with all the works in the following list or with their equivalents:

For 1899; Shakespere's As You Like It, Irving's Sketch Book, De Quincey's English Mail Coach, Scott's Marmion, Longfellow's Evangeline, George Eliot's Silas Marner, Tennyson's Idylls of the King.

For 1900; Shakespere's Macbeth, Milton's Paradise Lost, Books I and II, the Sir Roger de Coverley Papers in the *Spectator*, Coleridge's Ancient Mariner, Carlyle's Essay on Burns, Shelley's Defence of Poetry, Burke's Speech on Conciliation with America, Lowell's Vision of Sir Launfal.

7. **History.** At least four terms' work should be presented in history. The course of study and available text-books should be somewhat as follows: first and second terms, History of Greece (Oman, Smith, Cox or Myers) and Rome (Allen, Leighton, Smith or Myers); third term, History of England (Montgomery or Gardiner); fourth term, The History of the United States (Channing, Thomas, Fiske, Johnson, Montgomery or McMaster) or Civil Government (Fiske's Civil Government or Andrews's Manual of the Constitution).

Instead of the first three terms' work in history indicated above, which is preferred, the University will accept for the present three terms' work in general history from one of the following text-books: Myers, Fisher, Freeman or Swinton.

GROUP IV.—ELECTIVE.

Three terms' work, and if Greek is not offered six terms' work, are to be selected in science or in a modern language.

8. **Science.** The subjects are arranged in the order of preference: physics, botany, physical geography, physiology, drawing or book-keeping, economics, chemistry, astronomy, zoology, geology.

Credit for entrance will not be allowed on these subjects for less than two terms in each, except that one, or one and one-half terms, may be allowed in botany, physiology, physical geography and drawing or book-keeping, and one term in astronomy, geology and economics. In no case should more than two sciences be taken up for consecutive study in a single year; and whenever possible three terms of consecutive work in one science are advised, especially in physics.

9. **German.** A full year in German may be indicated by Joynes-Meissner's German Grammar, Parts I and III, about fifty pages selected from Joynes's German Reader (D. C. Heath & Co.), all of Storm's Immensee (Henry Holt & Co.) and Riehl's Burg Neideck (Ginn & Co).

10. **French.** Van Daell's Introduction to the French Language or Edgren's French Grammar, and Van Daell's Introduction to French Authors or Super's French Reader will be accepted as an equivalent of a year's work in French.

PHILOSOPHICAL COURSE A.

The requirements for admission to this course are the same as for the Classical Course, except that one year of German or French, or one year of additional science may be substituted for Greek as provided for in Group IV.

PHILOSOPHICAL B, SCIENTIFIC, AND ENGINEERING COURSES.

Preparation in all respects the same as that offered for the Classical Course will be accepted for the Philosophical B, Scientific, and Engineering Courses.

In place, however, of the twelve terms' work in ancient languages

required for admission to the Classical Course, candidates for admission to the courses above named may offer as substitutes six terms' work in foreign language and six terms' work in science. The requirements in foreign language may be satisfied by (1) two years in Latin; (2) two years in German; or (3) two years in French; but not by a single year in each of two languages, nor by fractions of years in different languages, though the time spent in foreign language study may amount to two years in the aggregate.

Two years in foreign language is a minimum language requirement for admission to these courses; but nine terms of foreign language and three terms of science, or twelve terms of foreign language alone, will be acceptable substitutes for the twelve terms of ancient languages required for admission to the Classical Course; provided that not less than two years have been given to some one language, and not less than one year to each additional language that may be offered.

Work in science may be selected from the subjects named in Group IV, section 8. When the maximum amount of six terms is to be offered candidates are advised, if it be practicable, to spend one year on physics, and one half year on each of two subjects selected from the following list: botany, physical geography (Davis), physiology, drawing, and book-keeping.

Excepting the ancient languages, as above noted, all other requirements for admission to the Classical Course must be fully met by candidates for admission to the Philosophical B, Scientific, and Engineering Courses.

GENERAL OBSERVATIONS.

1. It is strongly advised that preparatory work be confined to few subjects and that they be so chosen that they form two or three groups of closely related subjects.

2. Subtitutes of real equivalents not affecting the absolute requirements respecting foreign languages, mathematics, English, and history, will be allowed for the purpose of adapting the University requirements to the means and needs of the several preparatory schools.

3. It is assumed that, under ordinary circumstances, four years in the high school will be devoted to meet the requirements for admission here prescribed.

4. Students who are admitted with conditions can make them up in the Iowa City Academy or under the direction of a private tutor approved by the Faculty.

ADMISSION BY CERTIFICATE.

The Board of Regents has adopted the following plan for the examination of high school pupils and for general high school inspection:

1. Any school may be placed upon the accredited list upon application of its principal or board of directors, provided the Collegiate Faculty of the University is satisfied as to its (*a*) course of study, (*b*) methods of teaching, (*c*) facilities for instruction.

2. The course of study of such schools must be adapted for fitting its graduates for one or more of the collegiate courses of the University, or it must be in the direct line of such preparation.

3. Whenever any accredited or other school requests it, its pupils may be examined by the University at a convenient time in any subject or subjects selected by the school authorities from the schedules of studies required for admission to the University, and each pupil will receive from the University a credit card for each subject passed.

4. The University shall provide for schools desiring the same, a syllabus of each of the subjects in which examination is to be taken.

5. All accredited schools shall be inspected at the pleasure of the University, the expense of the inspection to be borne by the University.

6. The authorities of accredited schools should report annually to the University all changes made in the course of study and submit a list of names of the instructors employed in the high school with subjects taught by each.

The following revised rules governing the accrediting of schools have been adopted by the Collegiate Faculty, and are now in force. The attention of the authorities of accredited schools is called to the revised rules in order that they may make such changes in their courses of study and in their plans of work as will enable them fully to conform to the rules.

RULES GOVERNING THE ACCREDITING OF HIGH SCHOOLS.

High schools meeting the following conditions may, at the option of the Collegiate Faculty, be accredited as making full preparation for one or more of the University courses:

1. The course of study should be not less than four years of thirty-six weeks each in length, following an elementary course not less than eight years in length.

2. The course of study should require of each pupil not more than four recitations daily.

3. The entire time of at least two teachers should be given to instruction in high school branches.

4. The quality of the instruction given and the character of the text-books used should be approved by the Faculty.

5. Schools seeking considerable credit in science should demonstrate their ability to do successful laboratory work.

6. Schools seeking considerable credit in history and English should give evidence of a special library equipment for these branches.

Private academies, seminaries, normal schools or other secondary schools meeting the conditions mentioned above, or their equivalent, may be accepted on the same basis as high schools.

ACCREDITED SCHOOLS.

All candidates for admission to the Freshman class, who come from accredited schools, must furnish to the University certificates containing *specific statements as to the amount of work done in each study.* Blank certificates will be furnished upon application to the President, and should be returned by September 1st.

There are doubtless other schools which are entitled to places on one or other of these lists, but because they have not furnished the data necessary to enable the University authorities to come to a safe conclusion in regard to their proper places in the lists, or because they have not signified a desire to come into accredited relations with the University, they are for the present omitted, without prejudice. Students presenting themselves from secondary schools, not included in the list of accredited schools, will be admitted only upon examination.

The following schools have been accredited by the Collegiate Faculty of the University as making full preparation for one or more of the courses of the Collegiate Department.

HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Ackley,	Supt. acts,	O. W. Maxwell.
Adel,	Supt. acts,	C. R. Aurner.
Albia,	Maicy Schreiner,	H. C. Hollingsworth.
Algona,	Minnie Coale,	N. Spencer.
Ames,	Supt. acts,	E. D. Y. Culbertson.
Anamosa,	Maude Humphrey,	A. Palmer.
Atlantic,	C. M. Cole,	William Wilcox.
Bedford,	Evelyn Miller,	E. H. Griffin.
Boone,	Alice Bradrick,	Geo. I. Miller.
Brooklyn,	Supt. acts,	Fred S. Robinson.
Burlington,	E. Poppe,	Chas. R. Shelton.
Carroll,	Chas. E. Blodgett,	C. C. Magee.
Cedar Falls,	Supt. acts,	O. J. Laylander.
Cedar Rapids,	Abbie S. Abbott,	J. T. Merrill.
Centerville,	Janet Wilson,	F. E. King.
Charles City,	Lovinia Marsh,	G. S. Dick.
Cherokee,	Rodney M. Arey,	A. V. Stover.
Clarinda,	Supt. acts,	G. W. Fisher.
Clinton,	E. L. Mason,	O. P. Bostwick.
Columbus Junction,	Supt. acts,	D. R. Michener.
Council Bluffs,	W. N. Clifford,	H. B. Hayden.
Corning,	Supt. acts,	D. M. Kelly.
Creston,	T. R. Amlie,	O. E. French.
Cresco,	Supt. acts,	L. E. A. Ling.
Davenport,	W. D. Wells,	J. B. Young.
Decorah,	Supt. acts,	E. A. Parks.
Denison,	G. W. Lee,	H. V. Failor.
Des Moines, E.,	E. H. White,	Amos Hiatt.
Des Moines, N.,	Arthur W. Brett,	F. A. Lacey
Des Moines, W.,	W. O. Riddell,	F. B. Cooper.
Dubuque,	F. L. Smart,	F. T. Oldt.
Eagle Grove,	Supt. acts,	J. G. Grundy.
Eldora,	Henrietta Holmes,	W. A. Doron.

HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Emmetsburg,	H. C. Richardson,	H. E. Blackmar.
Estherville,	Inez Myers,	C. C. Stover.
Fairfield,	A. B. Goss,	J. E. Williamson.
Forest City,	Supt. acts,	J. D. Stout.
Fort Dodge,	W. H. Wilcox,	F. C. Wildes.
Fort Madison,	J. W. McCulloch,	C. W. Cruikshank.
Geneseo, Ill.,		M. F. Miller.
Glenwood,	Supt. acts,	Jessie G. Nutting.
Greene,	Supt. acts,	J. R. Jamison.
Greenfield,	Supt. acts,	F. E. Palmer.
Guthrie Center,	Supt. acts,	Adam Pickett.
Guthrie County,		F. E. Lenocker.
Hamburg,	Supt. acts,	J. C. King.
Hampton,	Lenna Prater,	G. A. Bateman.
Harlan,	Alice Sudlow,	E. S. White.
Ida Grove,	E. T. Sheppard,	T. B. Hutton.
Independence,	Clara M. Travis,	J. L. Buechele.
Iowa City,	F. C. Ensign,	S. K. Stevenson.
Iowa Falls,	Mrs. A. L. Burdick,	L. Hezzelwood.
Jefferson,	Mrs. E. B. Wilson,	L. B. Carlisle.
Keokuk,	G. E. Marshall,	O. W. Weyer.
Knoxville,	H. E. Simpson,	Harlan Updegraff.
LeMars,	Jennette Carpenter,	E. N. Coleman.
Leon,	Supt. acts,	S. L. Darrah.
Lyons,	Supt. acts.	O. H. Brainerd.
Manchester,	A. E. Rigby,	R. W. Wood.
Maquoketa,	Supt. acts,	C. C. Dudley.
Marengo,	Supt. acts,	C. H. Carson.
Marion,	L. H. Marshall,	J. J. Dofflemeyer.
Marshalltown,	C. C. Carstens,	F. E. Willard.
Mason City,	William Ege,	A. R. Sale.
McGregor,	Supt. acts,	F. N. Willard.
Missouri Valley,	Emma C. DeGroff,	A. B. Warner.
Moline, Ill.,		H. M. Slauson.
Montezuma,	Ida McKee,	Bruce Francis.
Mt. Ayr,	Supt. acts,	L. H. Maus.

HIGH SCHOOL.	PRINCIPAL.	SUPERINTENDENT.
Muscatine,	E. F. Schall,	F. M. Witter.
Nevada,	Supt. acts,	H. G. Lamson.
New Hampton,	Blanche K. Perry,	D. A. Thornburg.
Newton,	Supt. acts,	E. J. H. Beard.
Osage,	Sadie M. Bold,	George Chandler.
Osceola,	Viola M. Ward,	I. N. Beard.
Oskaloosa,	O. E. Dixon,	S. J. Finley.
Ottumwa,	Gwen Griffiths,	A. W. Stuart.
Parkersburg,	Supt. acts,	W. F. Barr.
Perry,	Florence Zerwekh,	L. A. Blezek.
Red Oak,	E. U. Graff,	W. F. Chevalier.
Reinbeck,	Supt. acts,	J. L. Mishler.
Rockford,	J. C. Sanders,	J. C. Wilson.
Rock Rapids,	Ida Fesenbeck,	W. S. Wilson.
Sanborn,	May Kennedy,	J. J. Billingsly.
Sheldon,	Nellie Jones,	W. I. Simpson.
Shenandoah,	Lizzie Marley,	O. E. Smith.
Sibley,	Supt. acts,	W. P. Johnson.
Sigourney,	A. M. Bean,	J. M. Davis.
Sioux City,	W. A. Turnbull,	H. E. Kratz.
Spencer,	F. E. Trigg,	Carrie B. Parker.
Storm Lake,	Clara R. Bamber,	J. H. O'Donoghue.
Stuart,	C. F. Wright,	G. W. Bryan.
Taylorville Tp., Taylorville, Ill.,		W. E. Andrews.
Tipton,	Supt. acts,	W. L. Etter.
Traer,	Supt. acts,	O. M. Elliott.
Villisca,	Stella Westcott,	C. C. Williamson.
Vinton,	Katherine Cunningham,	H. C. Waddle.
Washington,	Mattie E. Emry,	G. H. Mullin.
Waterloo, E.,	Lydia Hinman,	F. J. Sessions.
Waterloo, W.,	Amy Boggs,	S. H. Sheakley.
Waukon,	Supt. acts,	E. L. Coffeen.
Waverly,	Supt. acts,	A. W. Merrill.
Webster City,	Wilber Sparks,	C. W. Martindale.
West Liberty,	Supt. acts,	L. T. Hill.
Williamsburg,	Supt. acts,	A. T. Hukill.

OTHER SCHOOLS.	PRINCIPAL OR PRESIDENT.
Cedar Valley Seminary, Osage,	Alonzo Abernethy.
Charles City College,	J. F. Hirsch.
Decorah Institute,	J. Breckenridge.
Denison Normal School,	W. C. Van Ness.
Dexter Normal College,	A. G. Smith. D. P. Repass.
Epworth Seminary,	Frank G. Barnes.
Howe's Academy, Mt. Pleasant,	S. C. Howe.
Iowa City Academy,	W. A. Willis.
Michigan Military Academy, Orchard Lake, Mich.,	J. Sumner Rogers.
Sac City Institute,	Walter Guthridge.
Urbana-Shrader Academy, Urbana,	Mrs. J. S. Wilson.
Washington Academy,	C. M. Grumbling.
Whittier College,	W. N. Halsey.
Wilton German-English College,	J. F. Grove.
Woodbine Normal School,	M. A. Reed. H. A. Kinney.

The work done in the schools named below is regarded as of sufficient merit to entitle them to recognition by the University.

Properly certified work from these schools will therefore be received so far as this work meets the preparatory requirements of the University.

HIGH SCHOOL.	PRINCIPAL.
Adair,	E. R. Neptune.
Allerton,	J. F. Holliday.
Anita,	F. B. Lawrence.
Audubon,	F. P. Hocker.
Avoca,	J. Peasley.
Bloomfield,	Will Fortune.
Brighton,	J. E. Vance.
Britt,	A. M. Deyoe.
Chariton,	S. M. Cart.
Charter Oak,	C. F. Garrett.
Clarence,	J. H. Morgan.
Clarion,	S. T. May.

HIGH SCHOOLS.	PRINCIPAL.
Clearfield,	H. S. Ash.
Clear Lake,	D. H. Campbell.
Colfax,	S. A. Power.
Correctionville,	T. B. Morris.
Corydon,	Charles Carter.
DeWitt,	Margaret Buchanan.
Dysart,	H. O. Bateman.
Eldon,	E. C. Mills.
Elkader,	J. E. Webb.
Exira,	W. H. Fort.
Fayette,	F. E. Finch.
Fonda,	R. B. Crone.
Fontanelle,	C. C. Smith.
Garner,	J. F. Doderer.
Glidden,	J. H. Beveridge.
Grundy Center,	J. E. Stout.
Holstein,	E. P. Bettenga.
Hubbard,	W. O. Reed.
Keosauqua,	David Williams.
Kingsley,	Frank Jarvis.
Lake Mills,	O. O. Vogenitz.
Manning,	W. H. Reever.
Mechanicsville,	Clarence McCracken.
Milton,	F. E. Buck.
Monticello,	C. R. Scroggie.
Morning Sun,	A. M. M. Dornon.
Moulton,	E. B. Rossiter.
Mt. Pleasant,	S. T. Walker.
Nashua,	C. J. Trumbauer.
Neola,	O. J. McManus.
North English,	E. H. McMillan.
Northwood,	E. M. Mitchell.
Oak Park, Des Moines,	G. W. Hanna.
Odebolt,	C. H. Kamphoefner.
Oelwein,	L. B. Moffett.
Orange City,	O. W. Herr.

HIGH SCHOOL.	PRINCIPAL.
Riceville,	P. M. Ray.
Richland,	W. C. Pidgeon.
Rolfe,	A. T. Rutledge.
Sac City,	J. N. Hamilton.
Shelby,	C. S. Cobb.
Shell Rock,	C. E. Buckley.
Sioux Rapids,	P. L. Dorland.
Springdale,	S. B. Stonerook, Jr.
Springville,	S. S. Milligan.
State Center,	J. E. Clayton.
Tama City,	C. E. Locke.
Victor,	W. H. Whitford.
Wapello,	J. W. Cradler.
West Union,	G. E. Finch.
Wilton,	P. A. McMillen.
Hawarden Normal School,	C. H. Brake.
Nora Springs Seminary,	H. A. Dwelle.
St. Ansgar Seminary,	J. O. Sethre.

ADVANCED STANDING.

Students from approved colleges bringing certificates of work and standing will be admitted without examination. In determining their position in the University, however, the value of the work done will be measured by the University standards.

Students coming from colleges whose requirements for admission are substantially those of the University will be admitted ordinarily to equal rank, provided they enter not later than the beginning of the Senior year. In every instance at least one year's work in residence must be completed in the Collegiate Department of the University. The assignment of studies shall be at the discretion of the Faculty.

Graduates of the four years' course of the Iowa State Normal School will be admitted to Junior standing without examination, and will be required to spend two years at the University before receiving a degree. Graduates of the three years' course will be admitted to Sophomore standing and will be required to spend three years in residence.

UNDERGRADUATE COURSES.

CLASSICAL COURSE.

Freshman Year.	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
Greek	5	5	5
Latin	4	4	4
English	2	2	2
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	1	3
Sophomore Year.			
French or German	5	5	5
English	2	2	2
Elective	8	8	8
Military Drill	3	1	3
Junior Year.			
Elective	15	15	15
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE A.

Freshman Year.	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
German or French	5	5	5
Latin	4	4	4
English	2	2	2

	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
Mathematics	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	1	3
Sophomore Year.			
French or German	3	3	3
Latin, German or French	5	5	5
English	2	2	2
Elective	5	5	5
Military Drill	3	1	3
Junior Year.			
Philosophy	2 or 3	2 or 3	2 or 3
Elective	12 or 13	12 or 13	12 or 13
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science must be taken in this course.

PHILOSOPHICAL COURSE B.

Freshman Year.	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
German	5	5	5
Latin or French	5	5	5
English	2	2	2
Mathematics.	5	5	5
or			
Mathematics	3	3	3
and			
Ancient History	2	2	2
Military Drill	3	1	3
Sophomore Year.			
German	3	3	3
English	2	2	2

	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
Latin or French	5	5	5
Elective	5	5	5
Military Drill	3	1	3
Junior Year.			
Elective	15	15	15
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

CONDITION:—Three terms of material science must be taken in this course. In the Junior and Senior years a *major*, the equivalent of not less than three hours extending through two years, and a kindred *minor* of not less than three hours extending through one year, must be taken. Each student may select his own major, but in the selection of his minor he must seek the advice of the professor in charge of the major, or of a committee of the Faculty. *Students entering this course on the terms prescribed for admission to the Scientific Course, but without the full Latin requirements for entrance to Philosophical Course A, must complete them after entrance, and the University will temporarily provide for instruction in Cicero's Orations, and Vergil.* This provision is made solely in the interest of considerable numbers of high school graduates whose course has not furnished the opportunity for fulfilling these requirements.

GENERAL SCIENTIFIC COURSE.

Freshman Year.	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
German or French	5	5	5
Mathematics	5	5	5
English	2	2	2
Drawing	3	3	3
Military Drill	3	1	3
Sophomore Year.			
German or French	5 or 3	5 or 3	5 or 3

	FALL. Hours a week.	WINTER. Hours a week.	SPRING. Hours a week.
English	2	2	2
Physics	5	5	5
Botany, Zoology, Morphology, Geology, Chemistry, Mathematics, or Astronomy	5	5	5
Military Drill	3	1	3
Junior Year.			
German or French	3 or 5	3 or 5	3 or 5
Chemistry	5	5	5
Botany, Zoology, Morphology or Geology	5	5	5
Elective	3 or 5	3 or 5	3 or 5
Military Drill	3	1	3
Senior Year.			
Elective	15	15	15
Military Drill	3	1	3

No substitution whatever is allowed for any of the required work of the Scientific Course, except that, in place of the full requirement in either one of the modern languages, there may be offered an equivalent amount of Latin of *collegiate grade*.

SPECIAL COURSES IN SCIENCE.

The student who wishes, in his undergraduate course, to specialize in some particular line of scientific study, should at the beginning of the Sophomore year choose from the group of alternate electives then open to him (Botany, Zoology, Morphology, Geology, Chemistry, Mathematics and Astronomy) that subject most directly connected with the branch to which he wishes to give special attention. He will thus be able to pursue his chosen study without interruption through three years of his course, the last year of which may, if he so choose, be devoted entirely to his specialty.

Such extreme specialization is not recommended to undergraduate students, it being the opinion of the Collegiate Faculty that a better preparation for a scientific career will be afforded by a broader and

more liberal course of study. However, those wishing to specialize in any branch of science are urged to confer freely with the professors with whom they expect to pursue such study.

Unless excused by the Faculty, each student pursuing a special course in science will be required in his Senior year to prepare a thesis upon some subject approved by the professor in charge of his specialty, such thesis to represent an amount of work entitling the writer to at least two credits.

COMBINED SCIENTIFIC AND MEDICAL COURSE.

1. Students who pursue the General Scientific Course and complete not less than two years of biologic science, and in the third year choose as one elective anatomy and dissection in the Medical Department, and in the fourth year two electives in the Medical Department, of which anatomy and physiology shall be one, may receive credit for the first two years of the regular course in Medicine, provided also that such students complete at least two electives in the Collegiate Department in the spring terms of the fifth and sixth years.

2. Students who at the outset declare their intention of pursuing a combined Collegiate and Medical Course, may in the General Scientific Course offer instead of German, two years' work in Latin.

3. The degree of B. S. shall be conferred in June of the sixth year.

COURSE IN CIVIL ENGINEERING.

FRESHMAN YEAR.

Fall Term.—French or German,* 5.† Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

Winter Term.—French or German, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 1.

Spring Term.—French or German, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

SOPHOMORE YEAR.

Fall Term.—German or English,* 3. Mathematics, 5. Surveying, 5. Physics, 5. Military Drill, 3.

* NOTE.—See Courses of Instruction in Civil Engineering for requirement in language.

† NOTE.—The numerals mean hours a week.

Winter Term.—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Mapping, 3. Physics, 5. Military Drill, 1.

Spring Term.—German or English, 3. Mathematics, 5. Descriptive Geometry, 2. Topographical Surveying, 3. Physics, 5. Military Drill, 3.

JUNIOR YEAR.

Fall Term.—Electricity and Magnetism, 5. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Railroad Curves, 3. Steam Engine, 2. Military Drill, 3.

Winter Term.—Dynamo and Motor, 3. Resistance of Materials, 2. Analytical Mechanics, 2. Applied Mechanics, 3. Graphical Statics, 3. Theory of Stresses, 3. Limes and Cements, 2. Military Drill, 1.

Spring Term.—Thermodynamics, 3. Hydraulics, 5. Graphical Statics, 4. Theory of Stresses, 5. Military Drill, 3.

SENIOR YEAR.

Fall Term.—Chemistry, 5. Sanitary Engineering, 2. Structural Designing, 4. Geology, 2. Civil Engineering, 4. Military Drill, 3.

Winter Term.—Chemistry, 5. Sanitary Engineering, 2. Structural Designing, 3. Laboratory, 2. Geology, 2. Civil Engineering, 3. Military Drill, 1.

Spring Term.—Water Supply Engineering, 3. Specifications and Contracts, 3. Geology, 2. Civil Engineering, 3. Laboratory, 2. Structural Designing, 3. Thesis. Military Drill, 3.

COURSE IN ELECTRICAL ENGINEERING.

FRESHMAN YEAR.

Fall Term.—German or French, 5.† Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3.

Winter Term.—German or French, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 1.

Spring Term.—German or French, 5. Mathematics, 5. English, 2. Drawing, 3. Military Drill, 3,

SOPHOMORE YEAR.

Fall Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

† NOTE.—The numerals mean hours a week.

Winter Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 1.

Spring Term.—French or German, 5. Physics, 5. Mathematics, 5. English, 2. Military Drill, 3.

JUNIOR YEAR.

Fall Term.—Physics: lectures, 1, laboratory, 4. Chemistry, 5. Analytical Mechanics, 3. Applied Mechanics, 2. Shop-work, 2. Military Drill, 3,

Winter Term.—Physics: lectures, 1, laboratory, 4. Chemistry, 5. Analytical Mechanics, 2, Applied Mechanics, 3. Shop-work, 2. Military Drill, 1.

Spring Term.—Direct Current Dynamo, 3. Physical Laboratory, 2. Chemistry, 5. Differential Equations, 3. Heat and Thermodynamics, 2. Shop-work, 2. Military Drill, 3.

SENIOR YEAR.

Fall Term.—Theory of Electricity, Photometry; Electrical Laboratory, 10. Draughting, 3. Steam Engine, 2. Military Drill, 3.

Winter Term.—Alternate Current Machinery, Electrical Laboratory, 10. Draughting, 3. Strength of Materials, 2. Military Drill, 1.

Spring Term.—Distribution and Transmission of Electricity, Telegraph and Telephone, Electrical Laboratory, 10. Electrochemistry, 5. Military Drill, 3.

NOTE.—One year of German and one of French are required. Either may be taken during the Freshman year, to be succeeded by the other in the Sophomore year. Electrochemistry, being given only during even-numbered years, will alternate with the Junior spring term chemistry.

BACCALAUREATE DEGREES.

For each of the courses of study leading to a bachelor's degree four years' work is required.

On completion of the regular courses, or of the special courses approved by the Faculty, the following degrees are conferred:

BACHELOR OF ARTS upon those who complete the Classical Course.

BACHELOR OF PHILOSOPHY upon those who complete the Philosophical Course.

BACHELOR OF SCIENCE upon those who complete the General Scientific Course, or either of the Engineering Courses, or a special course in science which has previously been approved by the Faculty.

See Combined Scientific and Medical Course.

The degree of BACHELOR OF DIDACTICS is conferred upon *graduates* in the regular courses who have completed the required work in pedagogy and can show proof of two years' successful teaching after graduation.

SPECIAL CERTIFICATES IN GERMAN AND FRENCH.

Special Certificates as to scholarship in German or in French will be granted under the authority of the Collegiate Faculty on the following conditions:

1. They shall be issued to students of this University on or after graduation only.

2. They shall be in the nature of an authorized guaranty as to scholarship in German or in French.

3. They shall be issued only after *at least* three years of full work (to represent *five* hours of lectures and recitations a week or an equivalent) in one of these subjects.

4. Candidates must pass a final examination in the subject in which the certificate is desired.

5. The examination must be conducted by the professor in charge of the subject, assisted by such other instructors as may be agreed upon by him and the President of the University.

6. These certificates will be signed by the President and by the professor immediately concerned.

COURSES OF INSTRUCTION.

LATIN LANGUAGE AND LITERATURE.

PROFESSOR CURRIER; ASSISTANT PROFESSOR POTTER, MISS HUGHES.

1. **Cicero and Vergil.** Cicero's Orations and Vergil's Aeneid. With the Aeneid is given a course in mythology. For students in Course Philosophical B as indicated on page 32. Miss HUGHES.

Throughout the year.

2. **Livy, Cicero, Vergil and Terence.** Fall: Livy, Selections from Books I, XXI and XXII. Winter: Cicero's De Senectute or De Amicitia and Selected Letters, with outline of Roman Literature. Spring: Terence's Phormio and Vergil's Georgics II or IV. Grammar, writing Latin and sight reading during the year. Those who show marked proficiency in writing Latin during the fall term are allowed an option of easy Latin to be read under the direction of the instructor during the winter and spring terms. Assistant Professor POTTER and Miss HUGHES.

Throughout the year, Mon., Tu., Wed., Th., at 10, 11 and 1:30.

3. **Cicero and Horace.** Fall: Cicero's Tusculan Disputations. Winter and spring: Horace's Odes, Satires and Epistles. This course is mainly occupied with the literary side of the authors studied. Professor CURRIER.

Throughout the year, Mon., Wed., Fri., at 9.

4. **Pliny and Tacitus.** Selected Letters of Pliny. Tacitus' Germania and Agricola. This course is principally literary and historical. As much attention is given to the Latinity of the Silver Age as is needful for the understanding and appreciation of the authors. Assistant Professor POTTER.

Throughout the year, Tu., Th., at 9.

5. **Cicero, Quintilian and Tacitus.** Fall: Cicero's De Oratore. Winter: Quintilian, Books X and XII. Spring: Tacitus' De Ora-

toribus. Particular attention will be paid to literary criticisms as exemplified in these authors. Professor CURRIER.

Throughout the year, Tu., Th., at 8.

6. **Tacitus and Seneca.** Fall and winter: Tacitus, selections from the Annals and Histories. Spring: Seneca's Morals and Letters. Professor CURRIER.

Throughout the year, Tu., Th., at 8.

Courses 5 and 6 are given in alternate years.

7. **Plautus.** Three plays. The treatment is mainly literary with due attention to metres and ante-classical forms and constructions. Assistant Professor POTTER.

Fall term, three hours a week.

8. **Early Latin Inscriptions and Poetry.** Assistant Professor POTTER.

Fall term, three hours a week.

Courses 7 and 8 are given in alternate years.

9. **Lucretius and Catullus.** Assistant Professor POTTER.

Winter term, three hours a week.

10. **Cicero's Letters.** Advanced course. Assistant Professor POTTER.

Winter term, three hours a week.

Courses 9 and 10 are given in alternate years.

11. **Juvenal and Martial.** Assistant Professor POTTER.

Spring term, two hours a week.

12. **Tibullus and Propertius.** Assistant Professor POTTER.

Spring term, two hours a week.

Courses 11 and 12 are given in alternate years.

13. **Seminary in Cæsar, Cicero and Vergil.** This is intended to meet the needs of prospective Latin teachers and others who wish to gain some familiarity with the methods of original research. The fall term is devoted to syntactical and historical studies covering Cæsar's Gallic War (seven books). The work of the winter term is mainly historical, and deals with Cicero's career as an orator. One half of the term is devoted to a study of the conspiracy of Catiline which is based largely on Sallust. Vergil's Aeneid complete is studied in the spring term mainly on the literary side. Assistant Professor POTTER.

14. *a. b.* **History of Roman Literature.** The reading by the class of selections from all the principal Latin writers will be supplemented by informal lectures on the history of the literature. Assistant Professor POTTER.

Fall and winter terms two hours a week.

14. *c.* **Latin Syntax.** Introduction to the study of historical syntax. Assistant Professor POTTER.

Spring term, two hours a week.

Courses 13 and 14 are given in alternate years.

15. **Roman Antiquities.** A systematic study of private life and of legal and political Antiquities. Professor CURRIER.

Throughout the year, two hour a week at 2:30.

16. **Seminary in Archæology.** For 1899-1900 the subject will be the Topography and Archæology of Rome and the vicinity. Professor CURRIER.

17. **Cicero, Livy and Ovid.** Sight reading of suitable selections. Professor CURRIER.

Throughout the year, one hour a week.

Courses 5 and 6 are open to students who have completed Courses 2 and 3 or 4, and must precede the other courses offered. Course 16 is intended for graduate students, and Courses 5—17 are open to them.

GREEK LANGUAGE AND LITERATURE.

ASSISTANT PROFESSOR CALL.

For the present a course in Goodwin's Greek Grammar, White's First Greek Book and Xenophon's Anabasis will be given to students who enter without the required preparation in Greek.

Throughout the year, daily at 11.

1. **Xenophon, Lysias and Homer.** Fall: Xenophon's Anabasis with written exercises based on the text read, and review of grammar. Winter: select orations of Lysias, social customs and political institutions. Spring: Homer's Iliad with study of Homeric times and the history and character of Greek epic poetry.

Throughout the year, daily at 10.

2. **Herodotus, Plato and Demosthenes.** Fall: selections from Herodotus. Winter: Plato's Apology with sight reading from Xenophon's Memorabilia. Spring: Demosthenes' Oration on the Crown.

Throughout the year, Mon., Wed., Fri., at 9.

3. **Greek Tragedy.** Fall: Aeschylus' Prometheus Bound. Winter: Sophocles' Antigone. Spring: Euripides' Alcestis. With this course are required supplementary readings from other tragedies and reports on the origin, literary form, and representation of Greek tragedy.

Throughout the year, Mon., Wed., Fri., at 8.

4. **Late Greek.** Fall: New Testament. Winter: Plutarch's Pericles. Spring: Lucian's Dialogues. Homer's Odyssey may be substituted for Plutarch.

Throughout the year, Tu., Th., at 9.

5. **Greek Poetry.** A course in Greek poetry through translations will be given to students who have no knowledge of Greek. Fall: epic poetry. Winter: dramatic poetry. Spring: lyric poetry.

Throughout the year, Tu., Th., at 8.

Course 1 is required of students in the Classical Course. Courses 2, 3 and 4 are open to students who have completed Course 1.

GERMAN LANGUAGE AND LITERATURE.

PROFESSOR WILSON; MR. STURM, DR. EASTMAN.

In the instruction in the German language the first year is spent in laying a broad foundation for the future work. At the beginning of the second year it is expected that the student will be able to read the literature with some degree of appreciation, and from this time on the ability to understand and to appreciate the great masterpieces of German literature is the main object in view; at the same time, however, the origin and history of words, and the relation that the German language bears to the English tongue are studied and explained. But the courses are, as a whole, literary rather than strictly philological or linguistic. Sight-translation, translating at hearing, writing from dictation, and conversation, as means to a proper *Sprachgefuehl*, form a part of the work.

As stated elsewhere, an equivalent of the work required in the Freshman year, Course 1, will be accepted, and students coming so prepared will be admitted, on examination, to Course 2. Course 1 represents from four to six terms of ordinary high school work. Courses 1, 2, 3, and 4, are Freshman, Sophomore, Junior, and Senior respectively, and must be taken in the order of the numerals. Courses 5 and 6 are advanced courses, but are open to persons who have done at least 1, 2, and 3, or an equivalent, and have made a high record during the three years. These six courses run through the entire collegiate year and are offered every year.

1. **Grammar and Reading.** Thomas's Practical German Grammar with constant practice in writing German, Storm's Immensee, Baumbach's Nicotiana, and Heyse's L'Arrabbiata. Six sections. Mr. STURM, and Dr. EASTMAN.

Throughout the year, daily.

2. **Freytag, Goethe, and Schiller.** Fall: Freytag's Die Journalisten with a review of the grammar. Winter: Goethe's Hermann und Dorothea, or Egmont, and composition. Spring: Schiller's Jungfrau von Orleans, and composition. Four sections. Professor WILSON, Mr. STURM, and Dr. EASTMAN.

Throughout the year, Mon., Wed., Fri.

3. **German Authors of the Nineteenth Century, and German Lyrics.** Fall: Scheffel's Ekkehard, and readings in German on the literature of the nineteenth century. Winter: Heine's Prose, and readings from Heine's Poetry by the instructor. Spring: Buchheim's Deutsche Lyrik, and lectures on German verse with special reference to the lyric poets studied. The work of this term is intended to give a general idea of the historical development of the German lyric from the sixteenth century to the present. Professor WILSON.

Throughout the year, Mon., Wed., Fri., at 11.

4. **Goethe, Lessing, and History of German Literature.** Fall: Goethe's Faust, Part I, with an outline of Part II. Winter: Lessing's Nathan der Weise. Spring: The History of German Literature. This term's work gives a general view of the development of German literature from the earliest times to the nineteenth century, special attention being paid to the two classic periods of the twelfth and

eighteenth centuries. Francke's Social Forces in German Literature is used as a text-book, which is supplemented by reports on assigned reading. Professor WILSON.

Throughout the year, Tu., Th., at 11.

5. **German Seminary.** For the study and discussion of the works of special periods or of special movements. The Faust Books, Marlowe's Faustus, Goethe's Faust, and the Romantic School are some of the subjects that have been studied. This course is primarily for graduate and advanced students. Admission by personal application. The course counts as a half credit each term. When the majority of applicants so elect, this work may be made a course in Advanced German Composition. Professor WILSON.

Throughout the year, Tu., Th., at 9.

6. **Middle High German.** Fall: Otis's Introduction to Middle High German, including the selections from the Nibelungenlied, and Paul's Mittelhochdeutsche Grammatik. Winter: selections from Hartmann von Aue's Der arme Heinrich. Spring: Middle High German lyric poetry, principally the poems of Walther von der Vogelweide. This course is primarily for graduate and advanced students, especially those who expect to teach German. Professor WILSON.

Throughout the year, Tu., Th., at 10.

Special Certificates as to scholarship in German are granted on or after graduation on conditions stated elsewhere in this Catalogue. The minimum amount of work required for such certificates is represented by Courses 1, 2, 3, and two chosen from 4, 5, and 6, but it is recommended that candidates make preparation in all these Courses.

For additional courses in German see under the head of Courses of Study for Graduates.

FRENCH LANGUAGE AND LITERATURE.

PROFESSOR VAN STEENDEREN; MR. FARNSWORTH.

1. **Elementary French.** Grammar, reading, composition and conversation: French Grammar, Joynes's Fairy Tales, Lewis's Michel

Strogoff, Fontaine's Lectures Courantes, Herdler's Scientific Reader. Four sections. Mr. FARNSWORTH, and Professor VAN STEENDEREN.

Throughout the year, daily.

2. **French Composition.** Written and spoken composition. Grandgent's French Composition and Méthode Berlitz, Part II. Two sections. Professor VAN STEENDEREN, and Mr. FARNSWORTH.

Fall term, Mon., Wed., Fri.

3. **Intermediate French.** Reading and composition. Dumas' Les Trois Mousquetaires, Victor Hugo's Hernani and Les Misérables. Grandgent's Composition continued. Two sections. Professor VAN STEENDEREN, and Mr. FARNSWORTH.

Winter and spring terms, Mon., Wed., Fri.

4. **History of French Literature.** A reading course with lectures, recommended to be taken with courses 2 and 3. Aubert's Littérature Française, Montaigne's De l'Institution des Enfans. Professor VAN STEENDEREN.

Throughout the year, Tu., Th.

5. **Modern French Authors.** Each student reads and paraphrases about six representative works by different authors. The University library provides these works. Fortier's Sept Grands Auteurs du XIX^e^ Siècle and Mellé's Contemporary French Writers. Professor VAN STEENDEREN.

Fall and winter terms, Mon., Wed.

6. **Advanced French Composition and Syntax.** Leune's Difficult Modern French. Free composition on subjects assigned. Professor VAN STEENDEREN.

Spring term, Mon., Wed.

7. **French Classical Drama and Fables.** Corneille's Le Cid and Horace; Racine's Athalie, Molière's Les Femmes Savantes and Le Tartuffe, La Fontaine's Fables. Professor VAN STEENDEREN.

Throughout the year, Tu., Th.

8. **Seminary.** Nineteenth century French literature. Professor VAN STEENDEREN.

Throughout the year, Tu.

9. **Seminary.** Seventeenth century French literature. Professor VAN STEENDEREN. Tu.

Only one of these Seminaries will be given in 1899–1900.

10. **Spanish.** Ramsey's Text-book of Modern Spanish. Ramsey's Elementary Spanish Reader. Doña Perfecta, Don Quijote.

Throughout the year, Mon., Wed., Fri.

Courses 2 and 3, 5, and 6 are to be taken together. Course 10 can be taken only with or after course 1.

Special Certificates as to scholarship in French are granted on or after graduation on conditions explained elsewhere in this Catalogue.

ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR REEVES; MR. COOK, MR. KELLY.

The organization of the following courses has in view the study of English as a means of expression, as a literature, and as a language.

The first and most important of these courses, the rhetorical, undertakes to enlarge and strengthen the student's own power of expression. Constant writing is required in the Freshman year, and the criticism, both oral and written, is directed to the individual needs of the student. Informal personal conferences are added to the work of the class, and every effort is made to enable the student to form a clear, forcible and sensible style.

In the study of English as literature a general survey from Old English times to the present is first required of all Sophomores. After this course has been completed the student may elect more special work. In the Junior and Senior years the study is about equally divided between the matter involved in the text, and the manner or style in which the text is written. Sound principles of criticism, analytic and constructive, are insisted upon, while outside reading of other masterpieces, with written reports, is designed for cultivation of the student's taste and judgment.

The study of the language itself is closely connected with both the rhetorical and the literary study of English. The characteristic changes in phonology, grammar, spelling, syntax and vocabulary, are

studied historically, and representative texts in Anglo-Saxon, Middle English and Early Modern English are read in class.

The graduate work in English, while presupposing a knowledge of the principal courses in the Collegiate Department, may be arranged to the needs of the student and thus permit him to offer one or more electives in studying for an advanced degree. The Seminary subject for 1899-1900 will be Shakespere and Elizabethan Drama.

Candidates for all baccalaureate degrees are required to complete two years of English, or six terms of two hours a week. Freshmen will take Course 1, and Sophomores, Course 4. Those who are preparing to teach English will be expected to take Course 12 in addition to some of the elective courses in literature. Law students wishing to take work in English will find Course 9 especially helpful, and also the rhetorical practice in Exposition and Argumentation.

(1) COMPOSITION AND RHETORIC.

1. **Constructive Rhetoric.** Recitations and semi-weekly themes. Five sections. Required of Freshmen. Mr. COOK and Mr. KELLY.

Throughout the year, two hours a week.

2. **Advanced Composition.** Lectures. Wendell's English Composition, and suggestive works of style. Tri-weekly and fortnightly themes. Open to those only who have attained grade A in Course 1, and who wish to add to the training of that course. Mr. COOK.

Fall and winter terms, two hours a week.

3. **Versification.** Practice in metrical composition in the fixed forms of verse such as the heroic couplet, blank verse, Spenserian stanza, ode, rondeau, sonnet, ballad and song. Analysis of the best examples of these forms in English poetry. Informal discussion of artistic questions. Open to those who have had Course 2. Mr. COOK.

Spring term, two hours a week.

(2) ENGLISH LITERATURE.

4. **English Literature.** General survey from earliest times to the present. Recitation and reports. Four sections. Required of Sophomores. Professor REEVES, Mr. COOK and Mr. KELLY.

Throughout the year, two hours a week.

5. **Chaucer's Poetry.** A study in fourteenth century art. Open to

those who have had the training of Course 4 in Chaucer grammar and pronunciation. Lectures; Skeat's The Student's Chaucer. Mr. COOK.

Spring term, two hours a week.

6. **English Minor.** Five hours a week. Professor REEVES. Old English, Monday and Tuesday. Middle English, Tuesday and Thursday. English Language, Friday.

7. **English Major.** Five hours a week. Professor REEVES.

Nineteenth Century Prose. Monday and Wednesday.

Nineteenth Century Poetry. Tuesday and Thursday.

Milton. Friday.

8. **English Seminary.** Shakespere and Elizabethan Drama. Professor REEVES.

9. **English Literature of the Eighteenth Century.** Lectures and reports on assigned readings of masterpieces and standard criticism. Junior and Senior elective. Mr. KELLY.

Fall and winter terms, two hours a week.

10. **American Literature.** Lectures, recitations and reports on assigned readings. General survey of both poetry and prose, including political literature and oratory. Mr. KELLY.

Throughout the year, two hours a week.

11. **Gothic and Old Saxon.** Graduate Course. Professor REEVES.

12. **Teacher's Course.** In the spring term a course of lectures for teachers of English in secondary schools will be given, one hour a week. The course will include historical grammar, syntax, phonology, and methods of studying literature and constructive rhetoric. Professor REEVES.

For prizes in English see general subject of prizes.

ELOCUTION.

MRS. PARTRIDGE.

1. **Elementary Vocal Training.** Studies in phonics with reference to articulation, and the eradication of faults of speech or voice; development of breath control for artistic voice production; studies of the factors of speech, the timbre of the voice; stress as applied to

tones, emphasis and accent, with selections adapted for illustration and analysis; studies in gesture; readings from standard authors.

This course is open to Collegiate Freshmen, and Junior Law students.

Throughout the year, two hours a week.

2. **Vocal Expression.** Elementary Principles of Vocal Expression; correct mental action in reading and speaking; studies and presentations from speeches and forms of the drama, to develop the powers of conception and the ability to express every phase of human experience as a means of securing simplicity and naturalness in all kinds of speaking. Lectures on problems in vocal expression. Study of monologues, impersonations, and miscellaneous selections, with individual criticism. This course is open to Sophomores who have completed Course 1.

Throughout the year, one hour a week. Each student receives in addition to class exercises a private rehearsal each week.

3. **Oratory.** Application of the principles of expression to the oratory of the bar; special exercises for the development of extemporaneous speaking; study of orations with the methods employed by leading orators; selections from Shakespere's tragedies and comedies as one of the best means of studying human character, studies in gesture for developing self-control and spontaneity of action. This course is open to Senior Law students.

Fall and winter terms, two hours a week.

HISTORY.

PROFESSOR WILCOX; DR. KAYE.

1. **History of Greece.** Text-book and lectures. This course is intended primarily for members of the Freshman class. Dr. KAYE.

Fall term, two hours a week.

2. **History of Rome.** Text-book and lectures. This work consists of two parts: The History of the Roman Republic in the winter term, and the History of the Roman Empire in the spring term. The work

of both terms is designed for members of the Freshman class. Dr. KAYE.

Winter and spring terms, two hours a week.

3. **History of Mediæval Europe.** Text-book and lectures. This course is intended primarily for members of the Sophomore class and presupposes acquaintance with the History of Greece and Rome. The course is divided into three parts to correspond with the three terms of the University year. The first part, constituting the work of the fall term, extends from the final overthrow of the western Roman empire in 476 A. D. to the death of Charles the Great, 814 A. D. The work of the winter and spring terms traces the downfall of the Carolingian system and its gradual reconstruction into Modern Europe. Dr. KAYE.

Three terms, two hours a week.

4. **History of the Jews.** Lectures and special assignments. A history of the Hebrew people from the earliest times to the destruction of Jerusalem by the Romans. This course is designed to give a general view of the progress of Oriental civilization and to trace the development and significance of the great Semitic Religions. Attention will be directed to other eastern nations with a view to illustrating their political and institutional relation to the Jews. This course is open only to those who have taken Courses 1 and 2, or their equivalents. Dr. KAYE.

Fall and winter terms, two hours a week.

5. **Constitutional History of England.** Analyses and lectures. This course is intended for members of the Junior and Senior classes only. As much previous work as possible in Ancient and Mediæval History should be taken before beginning it. Professor WILCOX.

Three terms, three hours a week.

6. **Constitutional History of the United States.** Lectures. This course is designed for Senior and graduate students. The course embraces, during the fall term, the study of the origin and development of the constitution of the United States from preceding political forms. The winter and spring terms finish the work with a study of the working of the United States Government under the constitution from 1789 to the present. Professor WILCOX.

Three terms, three hours a week.

7. **The French Revolution, and the Napoleonic Era.** This course is designed for Senior and graduate students. Considerable work in Mediæval History is an indispensable prerequisite. Professor WILCOX.

Fall and winter terms, two hours a week.

8. **The Nineteenth Century History of Europe.** This is a sequel to Course 7 or its equivalent, and is open to the same classes of advanced students. Professor WILCOX.

Spring term, two hours a week.

9. **Seminary in English History.** This course is intended primarily for graduate students who are qualified to specialize in English History. Those Senior students who have had Course 4 and are capable of doing original and independent work will be admitted to this Seminary. Professor WILCOX.

Three terms, two hours a week.

10. **Seminary in United States History.** This course is also primarily designed for graduate students, but exceptions are made similar to those specified for Course 9. Professor WILCOX.

Three terms, two hours a week.

All the courses in History, including the two Seminaries, are given each year. There are no alternating courses.

All courses in History are elective. Admission to the courses is conditioned only upon the qualifications of the candidate who desires to take them.

Students are advised to plan their historical work so that it will be logical in its order of sequence. Students who intend to emphasize historical work in college are urged to make careful preparation in History in preparatory schools.

In arranging the courses in History in the University, the attempt has been made to present the entire field of historical study with reference to logical and chronological sequence, so that no period shall be neglected and each period be treated in the light of what goes before and what comes after.

POLITICAL SCIENCE.

PROFESSOR LOOS; DR. PATTERSON.

The several subjects in charge of the professor of political science are here grouped under the following headings: (1) *Political Economy*, (2) *Sociology and Political Philosophy*. The courses of the first group are, in the main, Junior and Senior electives, while those of the second are open only to Seniors and graduate students. Exceptions to these rules may be made in individual cases by the special permission of the professor in charge.

All the courses under the first group, except 1 and 2, presuppose some knowledge of the general principles of political economy as laid down in the manuals by Walker or Mill. Students who are not thus prepared are required to take Course 2 (not Course 1) as a preparation for the other courses in economics; Course 4, 5 or 7, may, however, be taken at the same time with Course 2, during the fall term, and 5, 6, or 8 during the winter and spring terms. Candidates for admission to advanced courses should in all cases consult the professor in charge before scheduling.

POLITICAL ECONOMY.

1. **Economic History.** After an introductory study of primitive man and primitive civilization (Starr's First Steps in Human Progress) the course will occupy itself mainly with the development of trades and manufactures in Europe (Gibbins's Industry in England), and later with the industrial development of the United States (Wright's Industrial Evolution of the United States). Open to Sophomores. Dr. PATTERSON.

Fall term, Tu., Th., at 8.

2. **Economics.** An introduction to the study of political economy. Order of topics: The nature and scope of economic science, fundamental economic concepts; the organization of industry; the theory of value, and the distribution of wealth; the functions of government. Text-book and lectures. Open to Juniors and to special students. Professor LOOS and Dr. PATTERSON.

Fall term, Mon., Wed., Fri., at 11.

This course will be repeated during the second half of the year when it will be in charge of Dr. PATTERSON. Two hours, with an occasional third hour for hearing reports on assigned topics.

Winter and spring terms, Tu., Th., at 8.

3. **Finance, Currency, and Banking in the United States.** Lectures on the financial history of the United States including a discussion of the currencies and a study of banks and banking. Professor LOOS.

Winter term, Mon., Wed., Fri., at 11.

NOTE.—Courses 2 and 3, given each year, Mon., Wed., Fri., at 11 during the fall and winter terms respectively, are followed in the spring term at the same hour, by a course in International Law. See below, Course 15.

4. **Statistics.** Lectures and investigation. A study of population in Europe and America, grouped under the heads: structure of the population, numbers, density, races and nationalities, sex, age, conjugal condition, and occupation. Growth of population: natural increase; births, intensity; sexes, nationality; marriages, intensity, age, productivity; deaths, intensity, sex, age, causes, epidemics and suicides. Immigration and emigration. Population in its economic aspects, agriculture, mining, manufacturing, commerce, railroads, banks, money, prices, wages, consumption. Population in its social aspects, education, pauperism and crime.

Readings in the literature of the subject will be assigned, and special care taken to acquaint the student with the practical use of the principal governmental publications bearing on the subjects discussed. Dr. PATTERSON.

Throughout the year, Tu., Th., at 11.

5. **History of Political Economy.** The history of political economy before, and including, Adam Smith, with introductory lectures on culture history. Beginning with a brief reference to primitive, ancient, and mediæval systems of industry and economic ideas, the course will occupy itself with a closer study of the modern era, the writings of the mercantilists, of the physiocrats, and of Adam Smith and his precursors. Throughout this course, and in the one which follows, careful attention will be given to the relations of political economy to political philosophy. Professor LOOS.

Fall term, Tu., Th., at 10.

6. **The Industrial Revolution, and Modern Social Questions.** An elementary course in recent economic history and theory. An analysis of the industrial revolution with lectures on the rise of the classical school of political economy, modern socialism, contemporary economic schools, and recent tendencies in legislation. Professor LOOS.

Winter and spring terms, Tu., Th., at 10.

7. **Public Finance.** A study in state expenditure, state income, and state debts. The class will read Bastable's Public Finance. Open to those who have taken Course 2 or its equivalent. Professor LOOS or Dr. PATTERSON.

Fall term, Tu., Th., at 9.

8. **Transportation.** The course will deal chiefly with railways; railroad organization and management, explanation of terms in common use in railroad accounts and reports, history of railroad development, discussion of rates, competition, discrimination, and state management (Hadley's Railroad Transportation), the commission system —state and inter-state. Dr. PATTERSON.

Winter and spring terms, Tu., Th., at 9.

9. **The Principles of Economics.** The development of the classical political economy will be carefully studied. Special attention will be given also to the mathematical work of Jevons and other writers, and to the recent contributions of the Austrian school. Professor Marshall's Principles of Economics will be used as a text. For Seniors and graduate students. Dr. PATTERSON.

Throughout the year, hours to be appointed.

10. **Debating Course.** May be counted also as an English elective. Selected topics in economics and politics. Mr. KELLY and Dr. PATTERSON.

Fall and winter, hours to be appointed.

SOCIOLOGY AND POLITICAL PHILOSOPHY.

11. **Sociology.** Part I: Lectures during the fall term on the primary factors and forces of social phenomena. Special attention is given to the earliest phases of political organization. Part II: In the winter term, police, pauperism, crime, and sanitation receive special attention. The close relation of the so-called practical sociology to

the German Verwaltungslehre will be pointed out. Open to Seniors and graduates. Professor Loos.

Fall and winter terms, Mon., Wed., Fri., at 10.

12. **Municipal Government.** A study of municipal government with particular reference to the economic and social problems of modern cities. The course is designed especially for those who have taken the course in Sociology, but it is open to any student who has taken Economics 2, or Politics I. Professor Loos.

Spring term, Mon., Wed., Fri., at 10..

13. **Roman Municipalities.** Lectures. For Seniors and graduates. Professor ROHBACH.

Fall or winter term, two hours to be appointed.

14. **Political Philosophy.** A study of political philosophy with special reference to modern conditions and problems. Lectures with assigned readings in Herbert Spencer, Leroy-Beaulieu, and other modern writers during the fall term, followed by a brief sketch of the history of the theory of the state—classical, mediæval, and modern, with some notice of state forms and the elements of legal history, during the winter term, and a more special examination of the current dogmas of individualism and socialism during the spring term. Professor Loos.

Throughout the year, hours to be appointed.

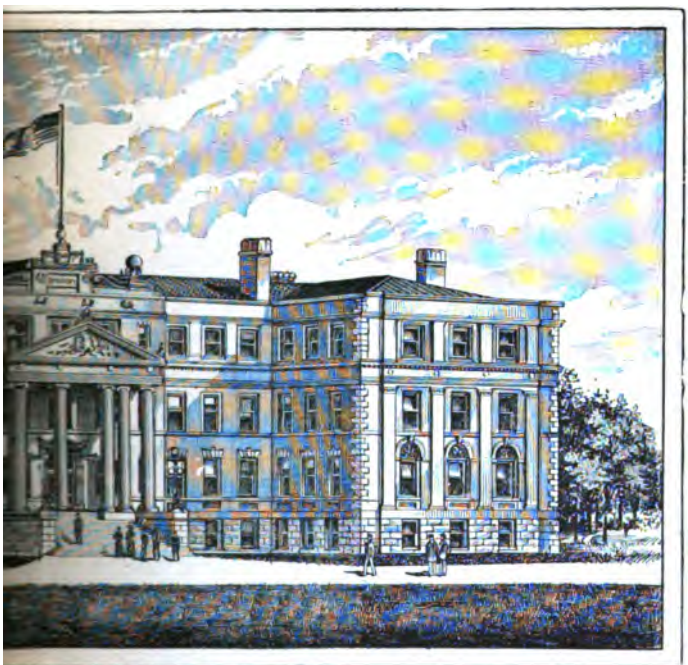
15. **International Law.** A text-book course on International Law (Lawrence, The Principles of International Law) with lectures on diplomacy and foreign relations. This course is offered for 1900, and alternates with Chancellor McClain's course in International Law, namely, a course of lectures with recitations in Snow's Cases in International Law (See Courses of Study for Seniors in Law Department); the latter course was given in 1899. Professor Loos.

Spring term, Mon., Wed., Fri., at 11.

UNIVERSITY OF IOW

This building, now being erected, will be 120 by 210 feet, three stories and basement, in height, and will contain ninety-two recitation rooms, seminary rooms and offices, waiting room for gentlemen, ladies' waiting room, and a general lecture room having a seating capacity of 250. The building has been designed in the Colonial style to bring it in harmony with the old Capitol Building, erected in 1840, now the central building of the University group, and will be built with Bedford stone, fireproofed throughout, lighted with gas and electricity, and equipped with a complete system of heating and ventilation.

In September, 1900, Collegiate Hall will be occupied by the Chairs of English, French, German, Greek, Latin, History, Political **Science, Pedagogy, Government and Administration, Psychology and Mathematics.**



COLLEGIATE HALL.

In addition to ample lecture rooms, each chair will have an office nd a Seminary room for the use of advanced students working nder the direction of the professors in charge, and for the chair of 'sychology there will be a large and well equipped laboratory.

It is probable that the valuable Library will find quarters in this uilding until it can go into a permanent home in a commodious nd fireproof building, presumably soon to be erected.

The building will cost $150,000. The architects are Proudfoot & ird, Des Moines, Iowa. Ground was broken in September, 1898, nd the foundation completed in December. The mason work of he basement will be completed about May 1, 1899. The contract or the erection of the building will be let March 29, to be com-leted Sept. 1, 1900.

GOVERNMENT AND ADMINISTRATION.

PROFESSOR SHAMBAUGH.

To indicate clearly the order in which the several subjects in Government and Administration are presented for purposes of university instruction, the principal subjects are first grouped into four general courses, namely: Politics I, Politics II, Politics III, and Politics IV. Then, to indicate more clearly the scope and treatment of the several subjects, a specific statement is made of each subject viewed as an independent course.

Politics I. Historical and Descriptive Politics. A study, historical and descriptive, of the leading governments of ancient and modern times. This is a comparative study of political institutions, wherein the more general and obvious phases of political phenomena will be presented. Historical and Descriptive Politics is here regarded as the fundamental course in Government and Administration. Open to all students except Freshmen.

Throughout the year, three hours, Mon., Wed., Fri., at 8.

Politics II. Principles of Government in the United States. A study of the principles of American government—national, commonwealth, and local. Fall term: History of Constitutional Government in the United States, including a detailed analysis of leading state papers, e. g., colonial charters, plans for union, commonwealth constitutions, etc. Winter term: American Constitutional Law, wherein the principles of Government in the United States will be discussed from the standpoint of judicial interpretation. Spring term: Local Government in the United States. The course in Local Government will alternate with a course in Political Parties in the United States. Open to Juniors and Seniors.

Throughout the year, three hours, Mon., Wed., Fri., at 9.

Politics III. Political Theory, and Comparative Constitutional Law. A study of the general and theoretical aspects of political phenomena. Fall term: Outlines of a system of political theory. Winter term: Comparative Constitutional Law, wherein the theoretical aspects of the constitutions of England, France, Germany, and the United States

will be considered. Spring term: Papers on selected topics in Political Theory and Comparative Constitutional Law will be prepared and read by the students. This is an advanced course for Seniors and graduates.

Throughout the year, two hours, Tuesday evening.

Politics IV. American Political Theory. A study in the history of political theory in the United States, wherein the writings of Hamilton, Madison, Washington, Jefferson, John Adams, Clay, Webster, Calhoun, and Lincoln will be read and discussed. This is an advanced course. Only a limited number of students are admitted.

Throughout the year, Tu., Th., at 9.

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1. **Historical and Descriptive Politics.** A study, historical and descriptive, of the leading governments of ancient and modern times. This is a comparative study of political institutions, wherein the more general and obvious phases of political phenomena will be presented. Fall term: The theory of evolution as a working basis in the study of Historical Politics; some general considerations in Anthropology; primitive institutions of the Indo-Europeans; the origin of government; the political institutions of the ancient Greeks; the political institutions of the Romans. Winter term: Roman Law—four weeks; Feudalism; the government of France; the governments of Germany—the Empire and Prussia. Spring term: the government of Switzerland—federal and cantonal; the government of England. Open to all students except Freshmen.

Throughout the year, three hours, Mon., Wed., Fri., at 8.

2. **History of Constitutional Government in the United States.** A study of the sources and early development of the principles of government in the United States. Herein the development of colonial governments, the growth of federalism, and the establishment of the first commonwealth governments will receive special consideration. The following documents will receive detailed analysis: colonial charters, plans for union, Articles of Confederation, Declaration of Independence, the first commonwealth constitutions and the Constitution of the United States. Open to Juniors and Seniors.

Fall term, three hours, Mon., Wed., Fri., at 9.

3. **American Constitutional Law.** A study wherein the principles of government in the United States will be discussed from the standpoint of judicial interpretation. The students will read and report upon selected cases in Constitutional Law. Open to Juniors and Seniors.

Winter term, three hours, Mon., Wed., Fri., at 9.

4. **Local Government.** A study of Local Government in the United States, wherein the development of the several forms of township, county, and township-county government will receive special consideration. This course will alternate with the course in Political Parties. Open to Juniors and Seniors.

Spring term, three hours, Mon., Wed., Fri., at 9.

5. **Political Parties.** A study in the practical workings of American government, wherein the history, organization, operation, and influence of political parties will be discussed. This course will alternate with the course in Local Government. Open to Juniors and Seniors.

Spring term, three hours, Mon., Wed., Fri., at 9.

6. **American Political Theory.** A study in the history of political theory in the United States, wherein the writings of Hamilton, Madison, Washington, Jefferson, John Adams, Clay, Webster, Calhoun, and Lincoln will be read and discussed. This is an advanced course, and is offered for those students who desire to make a more exhaustive study of American Government than is possible in the general course, Politics II. Only a limited number of students are admitted.

Throughout the year, Tu., Th., at 9.

7. **Government in Iowa.** A study, historical and descriptive, of the political institutions of the commonwealth of Iowa.

Spring term, two hours.

8. **Political Theory.** In this course an attempt will be made to present an outline of a system of pure political theory. An advanced course for Seniors and graduates. Seminary plan.

Fall term, two hours, Tuesday evening.

9. **Comparative Constitutional Law.** A comparative study of the constitutions of England, France, Germany, and the United States, wherein the general and theoretical aspects of government will be considered. An advanced course for Seniors and graduates.

Winter term, two hours, Tuesday evening.

10. **Administrative Law.** A comparative study of Administrative Law in France, Germany, England, and the United States. An advanced course for graduates.

One term, two hours.

11. **Roman Law.** A course of about twelve lectures on the history and principles of the Roman Law. These lectures are given in connection with and as a part of the general course, Politics I. See above.

PHILOSOPHY.

PROFESSOR PATRICK; ASSISTANT PROFESSOR SEASHORE.

1. **Deductive Logic.** An elementary course. Text-book: Jevons's Elementary Lessons in Logic, with reading in Welton's Logic and Mill's Logic. Professor PATRICK.

Fall term, two sections, Tu., Th.

2. **Inductive Logic.** An introductory course on scientific method. Lectures, with supplementary reading in Mill's Logic, Jevons's Principles of Science and Welton's Logic. Professor PATRICK.

Winter term, Tu., Th.

3. **Ethics.** An elementary course. The reading of Mackenzie's Manual of Ethics will be accompanied by lectures. Dr. SEASHORE.

Spring term, two sections, Tu., Th.

4. **General Psychology.** This course will be introduced by a series of twenty lectures upon the nervous system, the localization of brain function, and the structure of the organs of the special senses. The lectures on general psychology will be accompanied throughout the year by demonstrations with apparatus from the psychological laboratory. Professor PATRICK and Dr. SEASHORE.

Students wishing to take five hours a week in psychology may supplement this course by Course 5 and Course 6.

Throughout the year, two sections, Mon., Wed., Fri.

5. **Laboratory Course in Experimental Psychology.** A theoretical and practical course in psychological experiment. The exercises are so arranged as to familiarize the student with the methods and the

apparatus of typical experiments in each of the approved lines of psychological research. The students perform the experiments, and report and discuss the results and literature on each subject. Laboratory work and reports. Dr. SEASHORE.

This course may be taken with or in sequence to Course 4, and may be followed in the spring term by Course 6.

Fall and winter terms, Tu., 2:30 to 3:30, Th., 2:30 to 4:30.

6. **Abnormal Psychology.** Hypnosis, sleep, alterations of personality, automatism, hallucinations and illusions, and the psychology of the abnormal and defective classes will be discussed. Lectures, with required reading. Prerequisite, Course 4. Dr. SEASHORE.

Spring term, Tu., Th.

7. **History of Philosophy.** A course in Greek, mediæval, and modern philosophy. The fall term will be devoted to pre-Socratic Greek philosophy and to Socrates, Plato, and Aristotle. Plato's Republic will be read and carefully studied. Each member of the class will read and report upon one other of the Platonic dialogues. In the winter term the work will include mediæval philosophy and modern philosophy as far as Hume. The spring term will be devoted to Kant and German Philosophy of the nineteenth century. Professor PATRICK.

This course may be supplemented by Course 8.

Throughout the year, Mon., Wed., Fri.

8. **Seminary in Philosophy.** Papers and discussion upon special problems in philosophy. The following plan is proposed for the year 1899-1900: Fall term, special study of materialistic theories of reality. Winter term, mysticism. Spring term, theism and anti-theistic theories. This course is primarily for graduates. It may be taken by undergraduates by special permission. Professor PATRICK.

Throughout the year, two hours.

9. **Special Research in Psychology.** Original investigation of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *University of Iowa Studies in Psychology*. This course is primarily for graduates, but may be taken by undergraduates who have had Courses 4 and 5. Dr. SEASHORE and Professor PATRICK.

Throughout the year, hours to be arranged with instructors.

10. **Development of Mind.** This will be a course in genetic psychology. It will include an introduction on comparative psychology, the methods and results of psychological experiments upon children, and the laws of mental development in general so far as such laws have been gained. This course is primarily for graduates. Dr. SEASHORE.

Spring term, Tu., Th.

For the convenience of students wishing to make each year's work in this department continuous throughout the year, the following combinations of courses are suggested:

Courses 1, 2 and 3, two hours, through three terms.

Course 4, three hours, through three terms.

Course 5, and 6 or 10, two hours, through three terms.

Course 7, three hours, through three terms.

Course 8, two hours, through three terms.

Course 9, two hours, through three terms.

Candidates for the degree of Bachelor of Philosophy are required to take the equivalent of three terms' work of two or three hours each in this department. Course 4, or Courses 1, 2 and 3, are recommended for this requirement.

The Psychological Laboratory, No. 14 North Clinton street, is open daily from 8 to 12 A. M., and from 2 to 4 P. M. A description of the laboratory and apparatus will be found in this Catalogue under the head of Material Equipment of the Collegiate Department. The library of philosophy is supplied with the standard works in logic, psychology, ethics, and philosophy, and is open daily during laboratory hours.

PEDAGOGY.

PROFESSOR MCCONNELL; MR. DORCAS.

1. **General Pedagogy.** This course is designed primarily for students who have had no teaching experience; it is a text-book course and consists of a general treatment of the principles and practice of school teaching. The text-books used are Putnam's Manual of Pedagogics, Gregory's Seven Laws of Teaching, Prince's Courses and

Methods, and White's School Management. The course is open to all students who are permitted by the rules of the University to take elective courses. MR. DORCAS.

Throughout the year, five hours a week.

2. **Philosophy of Education.** It is the purpose in this course to set forth the aims of education, and the laws upon which mental development depends; to treat in some detail the educational doctrines and theories that have become effective or promise to become effective in determining the trend of school practice; and to devote some time to the application of the laws of mental development, and to the selection and arrangement of the materials of instruction.

The course is open to Juniors, Seniors, and special students.

This course should be preceded by a course in general psychology or an extended experience in teaching. Professor MCCONNELL.

Fall and winter terms, Mon., Wed., Fri., at 10.

3. **Teaching and Governing.** This course will embrace a careful study of De Garmo's Essentials of Method and other related literature. The methods of teaching the various subjects of the public school curriculum will be discussed and illustrated. Through the kindness of the school authorities of Iowa City, students taking this course will be allowed the privilege of visiting the schools freely, for the purpose of familiarizing themselves with the methods of work employed. Lectures on school government and school sanitation will conclude the course. Professor MCCONNELL.

Throughout the year, Tu., Th., at 10.

4. **History of Education.** This course will consist of three distinct parts: (*a*) The ancient and mediæval period, (*b*) the modern period, and (*c*) the history of education in the United States. The work will consist of lectures, recitations, and essays on assigned topics. Mr. DORCAS.

Throughout the year, two hours a week.

5. **School Supervision.** In this course the student will be expected to make a study of the following subjects: General school management, the art of classifying schools, and the art of arranging courses of study. Lectures and recitations. Professor MCCONNELL.

Fall term, two hours a week.

6. **School Systems.** This course will require of the student an examination of the state and city systems of the United States. Lectures and reports. Professor McCONNELL.

Winter term, two hours a week.

7. **Child Study.** In this course the history, literature, and methods of work in child study will be treated. Professor McCONNELL.

Spring term, two hours a week.

8. **Secondary Education.** This course will include a study of the report of the Committee on Secondary School Studies and other related literature. The organization of courses of study and the methods of instruction in high schools will receive specific treatment in lectures, discussions, and reports. Professor McCONNELL.

Spring term, two hours a week.

9. **Seminary in the Theory and Practice of Teaching.** This Seminary will afford an opportunity for the special investigation of educational problems. The work is designed to be germane to Courses 2, 3 and 7. Membership in this Seminary is contingent upon special arrangement with the professor in charge. Professor McCONNELL.

Throughout the year, Tuesday, 7:30—9:30 P. M.

10. **Seminary in Secondary Education.** This Seminary will afford its members an opportunity to make a practical study of high school work. The work will include a careful examination of the text-books used in secondary schools, the preparation of examination lists for use in secondary schools, and the judging of examination papers prepared by high school pupils. Mr. DORCAS.

Throughout the year, two hours a week.

11. **Teachers' Seminary.** Open to public school teachers. The subjects chosen for this Seminary will be such as are suggested by the requirements of its members. Professor McCONNELL, and Mr. DORCAS.

Throughout the year, Friday, 7—9 P. M.

NOTE.—The courses in Pedagogy, except as otherwise designated, are open to Juniors, Seniors, and special students. Candidates for the degree of Bachelor of Didactics are required to take three full terms' work in Pedagogy.

Students who are intending to fit themselves for teaching in the

public schools are advised to select their undergraduate work with special reference to the staple branches of instruction in the public high schools.

State Certificate. The State Board of Educational Examiners, as authorized by law, will grant state certificates, good for five years, to graduates of the Collegiate Department of the University who comply with the following conditions:

(*a*) The applicant must take three full terms' work in Pedagogy at the University.

(*b*) He must furnish written statements, prepared expressly for the Board, from one or more county superintendents, or other experienced educators, certifying to the professional success and good moral character of the applicant.

(*c*) He must furnish written official statements, addressed to the Board, from school boards, or directors, for whom the candidate has taught, certifying to his success in teaching and government.

(*d*) He must apply to the Board through the Professor of Pedagogy, to whom he shall send, in addition to the above described certificates, a formal application for a state certificate, such other credentials as may be required, and the sum of three dollars. The application for a state certificate should be made by using the blank form provided for that purpose by the State Board of Educational Examiners.

(*e*) All the papers and credentials required from candidates for state certificates must be filed with the President of the University at least thirty days before the date fixed for the examination.

Life Diploma. The State Board of Educational Examiners grants life diplomas, according to law, to graduates of the University who have complied with the state certificate conditions mentioned above, and who, in addition thereto, have had a successful teaching experience of five years after graduation. Applications are to be made through the Professor of Pedagogy. The following are the regulations of the Board in reference to applicants for life diplomas.

(*a*) The Board itself holds the right, which it exercises at discretion, to investigate the character, scholarship, and professional standing of every applicant.

(*b*) The candidate must present an original thesis, *in his own handwriting*, of not less than 3,000 nor more than 5,000 words, upon some

professional topic selected by the President of the Board. The thesis will be subjected to a critical examination by at least two persons chosen by the Board.

(*c*) The credentials required, the registration blank properly filled, and the thesis, accompanied by the fee of five dollars, must be filed with the President of the University at least thirty days before the date fixed for examination.

PHYSICS.

PROFESSOR VEBLEN; MR. BOWMAN, MR. VEBLEN.

1. **Mechanics and Heat.** Lectures and recitations. Professor VEBLEN and Mr. VEBLEN.

Fall term, daily at 11.

2. **Electricity and Magnetism.** Lectures and recitations. Professor VEBLEN and Mr. VEBLEN.

Winter term, daily at 11.

3. **Sound and Light.** Lectures three times a week, laboratory work twice a week. Professor VEBLEN, Mr. BOWMAN, and Mr. VEBLEN.

Spring term, lectures, Mon., Wed., Fri., at 11.

Courses 1, 2 and 3 constitute the general elementary work in physics required of all scientific and engineering students, and must be preceded by the mathematics of the Freshman year.

4. **Physical Measurements and Observations.** Laboratory work. Mr. BOWMAN.

One term, daily.

5. **Measurements and Determination of Constants.** Lectures and laboratory work. Professor VEBLEN and Mr. BOWMAN.

One term, daily.

6. **Measurements.** Special investigation and research to follow Courses 4 and 5. Professor VEBLEN and Mr. BOWMAN.

Courses 4, 5 and 6 may be taken any term, but must be pursued in the order of their numbers. These courses are planned for students taking a second year in physics. Course 4 is required of electrical

engineering students in the fall of their Junior year. In the winter of the same year they take 5, but in their case this course deals more especially with electrical measurements.

7. **Direct Current Dynamos and Motors.** Three lectures a week, laboratory work twice a week. For electrical engineering Juniors. Professor VEBLEN and Mr. BOWMAN.

Spring term, daily.

8. **Theory of Electricity and Photometry.** Lectures five times a week, laboratory work ten hours. Professor VEBLEN and Mr. BOWMAN.

Fall term.

9. **Alternate Current Machinery.** Five lectures a week, ten hours of special laboratory work. Professor VEBLEN and Mr. BOWMAN.

10. **Distribution of Electrical Energy; Telegraph and Telephone.** Lectures and laboratory work. Professor VEBLEN and Mr. BOWMAN.

Spring term, ten hours a week.

The last three numbers form the Senior year course of the electrical engineers, and will in general include five lectures a week, the subjects treated being indicated above. The work in the laboratory consists of practice with the photometer, experiments, and measurements on the various machines, transformers, and other apparatus, and tests of insulators, conductors, samples of iron, etc. The student has the choice in the latter part of the year of preparing a thesis or carrying out some research, or doing other special work.

11. **Electricity and Magnetism.** For civil engineering students. Two lectures a week, laboratory work three times a week. Professor VEBLEN.

Fall term, daily.

12. **Dynamo-electric Machinery.** Lectures to civil engineering students. Professor VEBLEN.

Winter term, three times a week.

13. **Heat and Thermodynamics.** Lectures to Junior electrical and civil engineering students. Mr. BOWMAN.

Spring term, twice a week, with one day each week in electrical laboratory for civil engineers.

14. **Shop Work.** For electrical engineers. Mr. Bowman.

Throughout the year, twice a week.

15. **Seminary.** The systematic reading of physical and electrical journals by those students who are well enough equipped, is encouraged by a weekly Seminary, conducted for this purpose by Professor VEBLEN.

In addition to the above, lectures and laboratory courses in selected topics will be given as circumstances may require or the facilities for instruction may admit. Laboratory work of any grade may be taken any term, three or more times a week.

CHEMISTRY.

PROFESSOR ANDREWS; MR. WALKER, MR. BRINK.

1. **General Chemistry.** Lectures illustrated by experiments and accompanied by a weekly quiz and laboratory work. Professor ANDREWS.

Fall term, four times a week, laboratory once a week.

2. **General Chemistry.** (Continued.) Lectures illustrated by experiments Introduction to qualitative analysis. Laboratory work, six hours a week. Professor ANDREWS and Mr. WALKER.

Winter term: Lectures Tu., Th., at 9. Laboratory at hours to be arranged.

3. **General Chemistry and Qualitative Analysis.** Lectures once a week, laboratory work eight hours. The student is instructed in the theory and practice of qualitative analysis and is expected to carry out about twenty-five complete analyses besides a number of partial ones. This course, except the lectures, can be taken in any term. Professor ANDREWS and Mr. WALKER.

Spring term, lectures at 9, laboratory eight hours, at times to be arranged.

4. **Quantitative Analysis.** Lectures on general principles and sources of error, once a week, laboratory ten hours. Professor ANDREWS.

Winter term, in odd numbered years. Fall term, even numbered years.

Lectures Tuesday at 4:30, laboratory according to arrangement.

6. **Quantitative Analysis.** Laboratory practicum. The student extends his work from the analysis of substances of definitely known composition to commercial products of various kinds and makes a study of certain technological methods. Professor ANDREWS.

Any term, ten hours a week.

6. **Theoretical and Physical Chemistry.** Lectures on the general principles of thermochemistry, electrochemistry, and chemical dynamics, accompanied by a parallel course of laboratory work covering, for example, the determination of molecular weights, experimental study of the laws of Avogadro and Dulong and Petit, the phenomena of mass action and of dissociation. Ostwald's Outlines of Physical Chemistry has hitherto been used as an auxiliary text. This course must be preceded by at least the first three courses in chemistry and the first three in physics or their equivalent. It will probably only be given in the even numbered years. Professor ANDREWS.

Spring term, lectures or laboratory work daily at hours to be arranged.

7. *a.* **Organic Chemistry.** Lectures on the fatty series, illustrated experimentally, so far as the subject will permit. Professor ANDREWS.

Winter term, odd numbered years, twice a week.

7. *b.* **Organic Chemistry.** Lectures on aromatic and heterocyclic compounds. Professor ANDREWS.

Spring term, odd numbered years, three times a week.

8. **Electrochemistry.** Lectures for students of electrical engineering, comprising the theory of electrolysis, chemistry of primary and secondary batteries, electrometallurgy and other industrial applications. Professor ANDREWS.

Spring term, even numbered years only, five times a week,

9. **Organic Preparations.** Laboratory work comprising preparation of typical organic compounds, methods of synthesis and study of reactions. This course must be preceded or accompanied by Course 7. Professor ANDREWS.

Winter term, laboratory daily, twelve hours a week. This course

may also be taken as a minor, six hours a week in winter and spring terms, accompanying Courses 7 *a* and 7 *b*.

10. **Determinative Mineralogy and Crystallography.** Laboratory practicum. Mr. WALKER.

Winter and spring, five times a week.

Course 3, Qualitative Analysis, and 4, and 5, Quantitative Analysis, except as noted, may be taken in either fall, winter, or spring term.

Course 6, may be taken after 3. This order is only recommended to those who devote no more than four terms in all to chemistry.

ANIMAL MORPHOLOGY AND PHYSIOLOGY.

PROFESSOR HOUSER; MR. LAMBERT.

1. **General Morphology and Physiology.** A laboratory course for the study of selected types representing the several great groups of animals. General biological phenomena, the unicellular animals, and representatives of the higher invertebrate groups. Fall term.—Dissection of typical vetebrates, the microscopic morphology of vertebrates, and lectures and experiments covering the elements of physiology. Winter and spring terms. Professor HOUSER and Mr. LAMBERT.

Throughout the year, daily, ten hours a week.

2. **Comparative Histology.** This is a course in the comparative histology of animal tissues and systems of organs. Emphasis is here given to the laboratory technique of histology. To this end the student is expected to become proficient in the standard methods of fixing, staining, imbedding, sectioning, mounting, and the other processes incident to the making of microscopical preparations. Prerequisite: Course 1. Professor HOUSER and Mr. LAMBERT.

Fall term. Laboratory, four days a week, eight hours. Lectures Friday.

3, **Comparative Neurology.** A course for the detailed study of the nervous system. The laboratory work involves the use of the special technique of Golgi, Nissl, Weigert, and Ehrlich. The architecture of the nervous system is presented in a series of lectures and demonstra-

tions. The texts of all the standard authorities are used for reference and for assigned reading. Prerequisite: Courses 1 and 2. Professor HOUSER and Mr. LAMBERT.

Winter term. Laboratory, Mon., Wed., Fri., six hours. Lectures Tu., Th.

4. **Vertebrate Embryology.** Laboratory work, accompanied by a series of lectures. The lectures discuss the general problems of vertebrate embryology, and are supplemented by collateral reading. The laboratory work embraces an examination of the frog's egg during its early cleavage, and a study of the chick at successive stages of development during the first four days of incubation. Prerequisite: Courses 1 and 2. Professor HOUSER and Mr. LAMBERT.

Spring term, daily, ten hours a week.

5. **Advanced Morphology.** Special courses of laboratory work will be arranged to meet the needs of those who desire to pursue morphological studies farther than the outlined Courses 1, 2, 3, and 4. Opportunities are offered for investigation in some branch of anatomy, histology, or embryology. Professor HOUSER.

Throughout the year, ten hours a week.

6. **Advanced Physiology.** A course for advanced students who desire to continue the investigation of physiological processes in greater detail. Laboratory work and library research. Prerequisite: Course 1. Professor HOUSER.

Throughout the year, three times a week.

ZOOLOGY.

PROFESSOR NUTTING; ASSISTANT PROFESSOR WICKHAM.

1. **Invertebrated Animals**—more especially the subkingdoms, *Cœlenterata, and Echinodermata*. PROFESSOR NUTTING.

Fall term, daily.

2. **Mammalia.** The principles of classification are here applied to a more limited group. More attention is paid to generic and specific characters and more detailed descriptions are made, daily practice being afforded by the use of the large series of mammals in the

Hornaday collection and main museum. Instruction in the preparation of skulls and skeletons is given to students desiring it. Professor NUTTING.

Winter term, daily.

3. **Ornithology**, including instruction in field work. Upon this course the whole work in systematic zoology is centered. Owing to the very large series of birds (about 11,000 specimens) in the museum, there is ample material for systematic work during the term. Professor NUTTING.

Spring term, daily.

4. **Entomology.** Insect Anatomy and development. Lectures and laboratory work. Assistant Professor WICKHAM.

Fall term, three hours a week.

5. **Entomology.** The principles acquired in the preceding term will be applied to the study of systematic entomology. Assistant Professor WICKHAM.

Winter term, three hours a week.

6. **Entomology.** The studies of the preceding term will be continued. Throughout this and the preceding course special attention will be given to the philosophical bearings of the subject. Assistant Professor WICKHAM.

Spring term, three hours a week.

7. **Lectures in Speculative Zoology.** This course is devoted to a presentation of the more prominent theories concerning the origin and evolution of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts, and intelligence of animals. The course will be open to Juniors and Seniors. Professor NUTTING.

Throughout the year, two hours a week.

8. **Thesis.** Equivalent to two terms' work. Advanced work in any group of animals of which the museum contains a sufficient series. Free access to any specimens or books on the museum floor is accorded to students doing thesis work in zoology, and a convenient study room has been fitted up for the use of advanced students.

The above courses are intended to be consecutive, except that Courses 4, 5 and 6 may follow 1, 2 and 3, in animal morphology, and 7 may be taken by Juniors and Seniors, without previous work in natural science. A combination of Courses 4, 5, 6, and 7 is recommended for students desiring a five hours' course which will include a critical study of a definite group of animals together with the application of biological principles elucidated in Course 7. This course is more particularly designed in the interest of students who do not intend to specialize in zoology.

The museum affords an abundance of material for study, and this is supplemented by (*a*) library of zoological works; (*b*) photographs of specimens studied, the photographs to be placed in the note books along with the descriptions; and (*c*) lectures in which the salient points of the various groups of animals are defined, and habits, distribution, etc., described.

Students taking special courses in biological science may receive instruction in field work and in the preparation of museum material.

GEOLOGY.

PROFESSOR CALVIN.

1. **Principles of Geology.** Lectures, illustrated by museum specimens, views, maps, and microscopic preparations.

Throughout the year, twice a week, Tu., Th., at 9.

This course may be supplemented with Course 1 in astronomy.

2. **General and Practical Geology.** During the fall term this course embraces lectures and field observations on the geological phenomena in the vicinity of Iowa City as an introduction to the fundamental facts of the science. The preliminary work also embraces the laboratory investigation of material collected during studies in the field. This is followed by the general facts of rock-making, continent-making, and the evolution of topographic forms. During the winter and spring terms attention is given to the chronological succession of strata in the Mississippi Valley, with studies relating to the genesis, lithology, geographical distribution, economic products, and typical faunas of

the several formations. Large series of rocks, minerals, fossils, maps, lantern slides, and photographs afford the material for lecture illustration and laboratory study.

Throughout the year, daily at 10. Additional hours for laboratory work arranged to suit the convenience of the individual students.

3. **Invertebrate Paleontology.** Lectures and laboratory research.

Throughout the year, daily. Lectures at 8. Laboratory work at convenient hours from 8 to 5.

4. **Economic Geology of the United States.** Lectures, with library and laboratory research.

Throughout the year, daily.

5. **Special Courses in Pleistocene Geology,** local geology and paleontology, characteristics and faunas of special formations, and similar subjects are arranged to meet the wishes of individual students.

Throughout the year, or through a single term, two, three, or five hours a week.

BOTANY.

PROFESSOR MACBRIDE; ASSISTANT PROFESSOR SHIMEK.

1. **General Botany.** A course of popular lectures and special studies intended to illustrate the purpose, method and scope of present botanical research, the progress of botanical science in recent years and the general economic importance of the subject. The lectures are illustrated by material from the Herbarium and the field, and no effort is spared to give the course the highest practical value. This course, though intended primarily for those intending to teach, is open to all students; it is complete in itself, but will be accepted as one of the three required terms in the case of those who elect Botany as material science. Professor MACBRIDE.

Spring term, five hours a week.

2. **Morphological Botany.** This course consists of lectures and laboratory work and is intended to illustrate the structure and life-history of the several types presented by the vegetable kingdom. Goebel's Outlines of Classification is used as basis. Special attention is paid to all

available forms of our cryptogamic flora; slime moulds, schizophytes, diatoms, algae, fungi, mosses, ferns and their allies are successively passed in review. This couse is open to all students who are credited with botany in their preparatory course. While it is in some particulars a review of the preparatory courses, it is also made the basis of work in the subsequent courses. Professor MACBRIDE and Assistant Professor SHIMEK.

Fall term, ten hours a week.

3. **General Plant Histology. General Structural Botany.** This course requires ten hours a week in the laboratory. Daily lectures accompany the laboratory work. The student receives special instruction in the preparation of vegetable sections, staining, mounting, etc., and is required to prepare for himself approved slides in illustration of all the topics presented in so far as these are referable to the microscope. Professor MACBRIDE and Assistant Professor SHIMEK.

Winter term, ten hours a week.

4. **General Plant Physiology.** This course consists of lectures, laboratory work and experiments, supplemented by collateral reading. The most important problems of vegetable physiology are discussed and illustrated by simple experiments. Detmer, Vines, Darwin, and all other standard authorities are available to the student for collateral reading. Assistant Professor SHIMEK.

Spring term, ten hours a week.

5. **General Mycology.** This is a course in the fungi and consists of laboratory work, supplemented by lectures, experiment and collateral reading. It is an advanced course. Students make and classify collections for themselves. In identifying material collected, students are aided by extensive mycological literature, *exsiccati*, etc. Professor MACBRIDE.

Fall term, daily as arranged.

6. **Vegetable Embryology.** A special course with lectures and laboratory work, including collateral reading. This course is confined chiefly to the consideration of the embryology of phenogamous plants. Phytocytology is taken up incidentally, and the peculiarities of nuclear division and karyokinesis noted. Professor MACBRIDE.

Spring term, daily as arranged.

7. **Special Work in Morphology.** A course designed for advanced students either graduate or special, offering opportunity for more exact investigation. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

8. **Special Systematic Work.** The large collections of the University now afford unusual opportunity for the special study of particular groups and families, and students are invited to engage in original research in the revision of accumulated species. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

9. **Special Applied Botany.** A course for students of Pharmacy and Medicine. The officinal *Materia Medica* is made the basis of the special study of medicinal plants, their nature, origin and relationships. Professor MACBRIDE.

Winter and spring terms.

10. **Thesis Course.** Designed for such students, either graduate or others, as desire to undertake problems of original research. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year.

11. **Seminary.** A special course in reading and study of current literature is arranged for such students as have completed at least three courses in Botany. Students are expected to prepare written reviews and criticisms of the literature presented, to engage in discussion of topics specially assigned, and to carry forward at appropriate seasons special investigations in the field as directed. Professor MACBRIDE and Assistant Professor SHIMEK.

Throughout the year, one hour a week.

MATHEMATICS.

PROFESSOR WELD; ASSISTANT PROFESSOR SMITH, MR. EASTON, MR. MERRITT.

Classical and philosophical students are required to take Course 1. Course 2 may, however, be substituted for this and the work otherwise required in ancient history. Scientific students must take Course 2.

Civil and electrical engineering students are required to take Courses 2, 3, and 9. Further explanations will be found in connection with the following syllabus.

Freshman Mathematics for Classical and Philosophical Students.

1. *a*, *b*. **Algebra.** Exercises in the statement and solution of problems involving simple and quadratic equations; ratio, proportion, and variation; arithmetical, harmonic, and geometrical progressions; properties of series and the development of simple functions into series; the binominal theorem; permutations and combinations; continued fractions; logarithms with applications. Fall term and first half of winter term.

1. *b*, *c*. **Trigonometry.** Trigonometric functions and formulæ; logarithmic functions; solution of right and oblique angled triangles, both plane and spherical; practical applications to problems in surveying, navigation, geography, astronomy, and mensuration. Second half of winter term and spring term.

Two divisions; throughout the year, Mon., Wed., Fri., at 11:00 and 2:30. Mr. EASTON and Mr. MERRITT.

Freshman Mathematics for Scientific and Engineering Students.

2. *a*. **Algebra and Trigonometry.** In algebra the work is nearly the same as that of 1 *a*. This is to be completed by November 22nd and will be followed by plane trigonometry. Fall term.

2. *b*. **Trigonometry.** The same as Course 1 *b*, *c*, with the addition of a discussion of Euler's, and Demoivre's formulæ and the development of the trigonometric functions into series. Winter term.

2. *c*. **Theory of Equations.** The work in the Theory of Equations will include the study of imaginaries, the properties of the general equation and their graphical representation, methods of approximating to the roots of higher equations with numerical coefficients, Cardan's solution of cubics, and biquadratic equations. The rudiments of the theory of determinants are also presented. Spring term.

Five divisions, daily, throughout the year at 8, 9, 10, and 1:30 Assistant Professor SMITH, Mr. EASTON, and Mr. MERRITT.

Sophomore Mathematics.

3. *a*. **Analytical Geometry.** The point, right line, parabola, circle, ellipse, and hyperbola in cartesian coördinates; discussion of the general equation of the second degree; analytical geometry of three dimensions; higher plane curves; etc. Fall term.

3. *b*, *c*. **Differential and Integral Calculus.** The fundamental principles of the calculus are studied and applied to the solution of problems in geometry, mechanics, etc. Winter and spring terms.

Two divisions; daily, throughout the year, at 8:00 and 10:00. Professor WELD and Assistant Professor SMITH.

Mathematics for Junior, Senior, and Graduate Students.

4. *a*, *b*. **Advanced Calculus.** A continuation of the work of the sophomore year; devoted particularly to topics in the differential calculus, such as the extension of Taylor's theorem, the theorems of Lagrange and Leibnitz, maxima and minima of functions of two or more variables, the theory of curved surfaces, transformations of differential equations, etc. Fall and winter terms.

4. *c*. **Differential Equations.** An elementary course devoted to the methods of solution of ordinary differential equations. Open to all students who have completed Course 3.

Throughout the year, Mon., Wed., Fri., at 9:00. Assistant Professor SMITH.

5. *a*. **Theory of Functions.** Lectures, the work of Durège being used by the student for collateral reading. Fall term.

5. *b*. **Definite Integrals,** including a discussion of the Beta and Gamma functions. Lectures. Winter term.

5. *c*. **Elliptic Integrals and Functions.** Lectures and problems. Spring term.

Throughout the year, Wed., and Fri., at 8:00. Professor WELD.

6. **Harmonic Functions.** *a*. Laplace's equation of continuity in rectangular, cylindrical, and spherical coördinates; Fourier's series and integral. Fall term. *b*. Applications of Fourier's series to problems in acoustics, heat, electricity, etc. Winter term. *c*. Cylindrical, zonal, and spherical harmonics with numerous applications to physical problems. Spring term.

Lectures. Throughout the year, Tu., and Th., at 11:00. Professor WELD.

7. **Differential Equations.** Lectures. The subject is to be treated from the standpoint of Sophus Lie.

Throughout the year, two or three hours per week, the time to be arranged.

8. **Determinants and Modern Geometry.** *a.* Determinants and the theory of quantics. Fall term. *b.* Modern geometry; the principle of *invariance*. Winter term. *c.* Modern geometry of three dimensions. Spring term.

Lectures. Throughout the year, Wed. and Fri., at 11:00. Professor WELD.

9. **Analytical Mechanics.** *a.* Statics. Composition and resolution of forces; the funicular polygon; centers of gravity; moment of inertia; friction, etc. Fall term. *b*, *c.* Kinetics. Rectilinear motion; projectiles; constrained motion of a particle; the pendulum, etc. Winter and spring terms.

A course for civil and electrical engineering students, supplemented by a three hours' course in applied mechanics in charge of Assistant Professor Magowan. (See course in civil engineering.)

Throughout the year, Tu. and Th., at 11:00. Assistant Professor SMITH.

10. **Advanced Analytical Mechanics.** *a.* Problems in statics and dynamics; virtual velocities; the principle of least action; etc. Fall term. *b.* The dynamics of a particle, with special reference to the theory of orbital motion. Winter term. *c.* The potential theory, with special reference to attractions. Spring term.

Throughout the year, Mon., Wed., Fri., at 11. Assistant Professor SMITH.

11. *a.* **The Method of Least Squares,** with numerous applications to the reduction of series of physical observations.

Fall term only; Mon., Wed., Fri., at 2:30.

12. *b.* **Calculus of Variations.** Lectures and problems.

Winter term only; Mon., Wed., Fri., at 1:30. Assistant Professor SMITH.

13. *c.* **Quaternions.** Lectures.

Spring term only; Mon., Wed., Fri., at 2:30.

ASTRONOMY.

PROFESSOR WELD, OR MR. EASTON.

The courses in Astronomy are open to all Sophomores, Juniors, and Seniors. The two here offered may be taken simultaneously or in succession. Others will be added as soon as necessary arrangements can be made. The University is provided with a small but well equipped students' observatory. (See Material Equipment.)

1. **General Astronomy.** A course of lectures on descriptive astronomy for the general student. This course may be supplemented by Course 1 in Geology, which is given at the same hour.

Three lectures a week, throughout the year, Mon., Wed., Fri., at 9.

2. **Practical Astronomy.** The student is taught the use of the sextant, transit instrument, clock, chronograph, etc.; the arrangement of the *American Ephemeris and Nautical Almanac;* and the general principles of time, latitude, longitude, and azimuth determination.

Two hours a week, throughout the year, Tu., Th., at 9; supplemented by work at the observatory.

CIVIL ENGINEERING.

PROFESSOR SIMS; ASSISTANT PROFESSOR MAGOWAN.

The Civil Engineering, Electrical Engineering, and General Scientific Courses are identical throughout the Freshman year, and change may be made from anyone of these courses to another at the beginning of the Sophomore year; but after this year no subjects can be substituted for the required civil engineering studies without the approval of the professor in charge and special permission of the Faculty. Students in one class will not be allowed to take subjects in an advanced class without permission of the professor in charge.

So far as possible, instruction will be given by recitation from textbooks. But where this method is not practicable, as in limes and cements and in some of the subjects treated under the head of Civil Engineering, the first part of the recitation period will be devoted to quizzes, and the remainder to a lecture.

Saturdays, throughout the last three years of the course, are devoted to work in the field, shop, and laboratories, in making surveys, testing materials, constructing models, photography, blue-printing and elementary carpentry.

For all work requiring no special preparation outside of the class room, such as drawing, field work, laboratory exercises, some of the work in graphical statics, not less than two hours will be required for one hour of credit.

Only the subjects that appear in bold-faced type are given under the direction of the chair of Civil Engineering.

French or German. See Course 1, under French, page 43; and Courses 1 and 2, under German, page 42. If French be elected in the Freshman year, English must be taken in the Sophomore year; but should German be elected, it must be continued through the Sophomore year. Freshman year, five hours a week, and Sophomore year, three hours a week.

Mathematics. See Courses 2, 3, or 4, and 9, under Mathematics, pages 75, 76, and 77. Freshman and Sophomore years, five hours a week.

English. See Courses 1 and 4, under English, pages 45, 46. For those electing French, two hours a week through the Freshman, and three hours a week through the Sophomore year; and for those electing German, two hours a week through the Freshman year.

Drawing. For general scientific, electrical and civil engineering students. The course comprises geometrical and mechanical drawing, orthographic, oblique, isometric and cabinet projections, and lettering. Linear perspective, shades and shadows. The work is given principally by means of personal instruction. The preliminary principles are studied from text and reference books, and their application is employed in making drawings from models and machinery to exact scale. Assistant Professor MAGOWAN.

Freshman year, fall, winter, and spring terms, three hours a week.

Land Surveying. For civil engineering students. The construction, adjustment and use of the compass, level and transit. Recitations and lectures, and field work with transit, level and solar compass; making profiles, leveling, and drainage surveys. A section of land is

surveyed and the location of all natural and artificial features determined and noted. Assistant Professor MAGOWAN.

Sophomore year, fall term, five hours a week.

Mapping and Surveying. Pen topography, including the making of topographical symbols; platting of section survey from notes taken during the previous term, and making a finished map of the same. United States public land surveys, determination of true meridians, and a study of the rules and Supreme Court decisions governing resurveys and relocations of lost or obliterated corners. Assistant Professor MAGOWAN.

Sophomore year, winter term, three hours a week.

Topographical Surveying and Mapping. A study of the adjustments and methods of use of the stadia, gradienter and plane table, etc., and the making of finished contour maps from notes of surveys made by the students, with the above mentioned instruments. Assistant Professor MAGOWAN.

Sophomore year, spring term, three hours a week.

Descriptive Geometry. The work in this study includes problems on the point, line, and plane; also the simple geometrical solids, shades and shadows, single and double curved and warped surfaces, and the generation and development of the same, and the solution of various practical problems.

Sophomore year, winter and spring terms, two hours a week.

Electricity and Magnetism. See Course 2, under Physics, page 64. This course is designed especially for the students in civil engineering, the object being a better general understanding of this important subject, both in general theory, and in the practice of making electrical measurements; also to give a more thorough knowledge of electricity preparatory to taking up the study of the dynamo and motor, in the winter term, the importance of which to the civil engineer is fully appreciated.

Junior year, fall term, five hours a week.

Analytical Mechanics. See Mathematics, Course 9, page 77.

Junior year, fall and winter terms, two hours a week.

Mechanics and Materials. For students in civil and electrical engineering. The treatment of this subject is designed to be such that the

student shall acquire a thorough training in the elementary principles of the mechanics of materials, and he is then required to verify, by his own investigations, the experimental laws and many of the derived formulæ. Numerous problems taken from actual engineering practice are given for solution from time to time, in order that the student may be trained in the application of his knowledge. The study includes the resistance and elasticity of materials, resistance of pipes and riveted joints, bending and resisting moments, shears, elastic curve, deflection of simple, cantilever, restrained, and continuous beams, strength of columns with concentric and eccentric loading, torsion and shafting and combined stresses, etc. Assistant Professor MAGOWAN.

Junior year, three hours a week, fall and winter terms.

Railroad Curves. The study of simple and compound curves and turn-outs. Enough field work is given to familiarize the student with the field methods of locating and running curves.

Junior year, fall term, three hours a week.

Steam Engine and Locomotive. The subject is treated under four heads, Heat, Steam, Engine, and Boiler. Under Heat is treated the economic combustion of fuel; under Steam the physical properties and the energy contained; under Engine, the modern types of simple and compound engines are discussed, with special reference to the locomotive. The students are given practical problems and are required to ascertain the indicated horse power from actual indicator cards, and to determine the efficiency of various engines from assigned data. The modern types of boilers are then discussed. Compressed air is also considered in connection with the transmission of power. Professor SIMS.

Junior year, fall term, two hours a week.

Graphical Statics. The course is so arranged that the study of the graphical method of determining stresses precedes that of the analytical method, it being the intention to assist the student to secure a mental photograph of the amount and kind of stress in the various members of structures, and thus provide him with a ready and impressive means of their comparison. The analysis, by this method, of roof trusses is first taken up, followed by that of the plate girder, and simple, cantilever, and swing bridges, with parallel and inclined chords, under various conditions of loading as required in the stand-

ard specifications, both for actual wheel concentrations and equivalent uniform loads, after which a course in metal and masonry arches is given. Professor SIMS.

Junior year, fall, winter, and spring terms, three hours a week.

Dynamo-electric Machinery, See Physics, Course 12, page 65. The importance of an elementary knowledge of this subject to the civil engineer in general practice is fully appreciated, and the course is designed to give the students a comprehensive knowledge of the laws governing the construction and operation of the dynamo and motor.

Junior year, winter term, three hours a week.

Theory of Stresses. Including the analytical determination of stresses and strains in all the structures analyzed by the graphical method. See Graphical Statics. Much time and study are devoted to this important subject. Professor SIMS.

Junior year, winter term, three hours a week; and spring term, five hours a week.

Limes and Cements. The instruction in this subject consists in assigned references, and a course of lectures on the principal properties of limes, hydraulic limes, and natural and artificial cements, with a general discussion of the nature and uses of concrete, followed by laboratory work. Each student is required to make and test briquettes of various cements, which will be furnished him for the purpose, and to calculate their relative values per unit of strength. Professor SIMS.

Junior year, winter term, two hours a week.

Civil Engineering. This subject is given by recitations and lectures, and is designed for the purpose of instruction in the practical application of the theoretical principles of civil engineering. The regular recitations and lectures are frequently interrupted by designs and estimates of the cost of the work under discussion. The subjects are treated with thoroughness commensurate with their relative importance and are, railway reconnaissance and location; theory of maximum economy in grades and curves; location of highways and resistance to traction thereon; hydrography; building materials; natural and artificial stones; quarrying and blasting; reaching deep foundation beds in earth, quick sand, water and silt, with pnuematic tubes, caissons and coffer dams, and by the Poetsch-Sooysmith freezing process; ordi-

nary earth work and methods of computation; masonry, classification of, and specification for; theory and practice of retaining walls; earth, loose rock, and light masonry dams and weirs; the construction of brick, masonry, and concrete arches; tunneling and the use of explosives; highway and street construction; railroad construction and maintenance of way; improvement of rivers and harbors, and canal transportation; street railways and comparison of street motors. Professor SIMS.

Senior year, fall term, four hours a week; winter and spring terms, three hours a week.

Hydraulics. Instruction in this work is given by means of lectures, recitations, and laboratory work. The course includes the weight and pressure of water; head and center of pressure; computation and measurement of velocity and discharge through orifices, weirs, pipes, conduits, canals, and rivers; the investigation of meters and motors, and the determination of water power. Assistant Professor MAGOWAN.

Junior year, spring term, five hours a week.

Heat and Thermodynamics. See Course 13, under Physics, page 65. Junior year, spring term, three hours a week.

Chemistry. See Courses 1 and 2, under Chemistry, page 66. Senior year, fall and winter terms, five hours a week.

Structural Designing. Prior to the work of designing proper, the students are required to make tracings or drawings of existing structures and compare the sections and connections of the various members with standard specifications. This work is followed by the design of trestles, highway and railway bridges, dams, foundations, etc., of which complete working drawings are made. Professor SIMS.

Senior year, fall term, four hours a week; winter and spring terms, three times a week.

Geology. See Course 1, under Geology, page 71. Senior year, fall, winter, and spring terms, two hours a week.

Sanitary Engineering. The work offered under this course includes principally sewers and sewerage, and the cleaning of cities and towns. The separate and combined systems of sewers are studied and discussed. The details of various sewer systems, as set forth in plans and specifications for their construction, are carefully studied. The cost of

construction, as taken from current contract prices, is especially noted, and the arrangement and action of plumbing fixtures are incidentally studied. The growing importance of this subject is fully realized, and it is the intention to keep the instruction fully abreast of the demands and needs of the present, and when possible, anticipate future needs and methods. Assistant Professor MAGOWAN.

Senior year, fall and winter terms, two hours a week.

Resistance of Materials. For civil and electrical engineers. This subject includes the strength, resistance, and properties of engineering materials, their behavior under stress, and the demonstration of the experimental laws, ultimate strength, elastic limit, resilience, etc., by tests in the laboratory. Professor SIMS.

Junior year, winter term, two hours a week.

Water Supply Engineering. A study of the methods of collecting, purifying, storing, and distributing water. Assistant Professor MAGOWAN.

Senior year, spring term, three hours a week.

Specifications and Contracts. A study of various standard specifications and a discussion of the effect of general clauses in contracts of same. Professor SIMS.

Senior year, spring term, four hours a week.

Thesis. At the close of the spring term of the Senior year, an acceptable original thesis will be required from each student before graduation, unless equivalent work shall have been done on papers prepared for the Engineering Society.

For more detailed information and description of course, apply to the Professor in charge, or send for special announcement of Civil Engineering Course.

MILITARY SCIENCE AND TACTICS.

MR. SCHAEFFER.

Instruction in these subjects is prescribed for all male students of the Collegiate Department, except such as are especially excused. Students who, for any valid reason, may desire to be excused must

appear in person before the military committee consisting of the commandant and five student captains, on the Monday immediately succeeding the beginning of each term, at the Armory, at 11 A. M. Those who claim exemption on account of physical disability, when the same is not apparent, must present to the committee a certificate from the battalion surgeon. All students not specially excused will report to the instructor on the Monday immediately following the beginning of the term, at the Armory, at 1 P. M.

ORGANIZATION.

The students are organized for instruction into a battery of artillery consisting of two gun detachments, and an infantry battalion consisting of four companies, a band, and the necessary staff officers. The commissioned officers are selected from the Senior, the sergeants from the Junior, and the corporals from the Sophomore class. The officers and non-commissioned officers are selected for character, military record, knowledge of the drill regulations, and general aptitude.

UNIFORM.

But one style of uniform is worn, known as the undress or fatigue uniform. It consists of a dark blue suit and is to be worn on all occasions of military duty; it can be procured either before or immediately after being admitted. A detailed description will be furnished on application to the President. Uniforms can be obtained in the vicinity at a cost of from $12 to $18.

COURSE OF INSTRUCTION IN MILITARY SCIENCE AND TACTICS.

The course of instruction is both practical and theoretical.

First Year. Practical instruction, three hours a week, 4:30 to 5:30. Practical instruction in infantry drill, school of the soldier, company and battalion drill; extended order and ceremonies; rifle firing at 100, 200, 300, 500, and 600 yards.

Second Year. Practical instruction: Infantry, same as first year; artillery in service of field guns (foot battery), with mechanical movements and saber exercise; signaling; rifle firing, same as first year.

Theoretical: winter term, one hour a week, 4:30 to 5:30. Recitations, drill regulations, and manual of guard duty.

Third Year. Practical: same as second year. Theoretical: winter term, one hour a week, 4:30 to 5:30. Recitations, service of security, and information.

ORGANIZATION OF BATTALION.

1898–99.

STAFF AND NON-COMMISSIONED STAFF.

1st Lieutenant and Adjutant . . . . . C. W. Startsman.
1st Lieutenant and Quartermaster . . . W. B. Chase.
Sergeant Major . . . . . M. L. Ferson.
Quartermaster Sergeant . . . . . F. C. McCutchen.
Color Sergeant . . . . . G. W. Egan.

COMPANY A.

Captain . . . . . B. F. Swisher.
1st Lieutenant . . . . . L. P. Lee.
1st Sergeant . . . . . G. F. Harkness.
Sergeants . . . . . B. Whitcomb. A. B. Phillips. T. Kingland.
Corporals . . . . . D. McClain. D. F. Miller. C. C. Converse. F. Briggs.

COMPANY B.

Captain . . . . . A. J. Burt.
1st Lieutenant . . . . . F. E. Latta.
1st Sergeant . . . . . E. R. Mitchell.
Sergeants . . . . . J. W. Kindall. W. J. Springer. A. P. Speers.
Corporals . . . . . M. V. Boddy. J. M. Brockway. M. E. Clapp. C. W. Soesbe.

COMPANY C.

Captain	H. C. Horack.
1st Lieutenant	R. A. M. Collins.
1st Sergeant	L. E. Switzer.
Sergeants	W. E. Beck.
	C. C. Hetzel.
	C. H. Cogswell, Jr.
Corporals	C. L. Coy.
	G. R. Allen.
	S. C. Williams.
	G. W. Ball, Jr.
	F. S. Drake.

COMPANY D.

Captain	W. W. Loomis.
1st Lieutenant	F. A. Williams.
1st Sergeant	E. F. Consigny.
Sergeants	C. R. Jones.
	F. H. Meggars.
	J. E. Remley.
Corporals	C. S. McDonald.
	G. E. Remley.
	E. W. Russell.
	J. G. Griffith.
	E. F. Burrier.

BATTERY AND SIGNAL CORPS.

Captain	L. D. Weld.
1st Lieutenant	L. R. White.
1st Sergeant	O. M. Deems.
Gunner	A. Cass.

COURSES OF STUDY FOR GRADUATES.

It is the aim of the University to furnish facilities for advanced study commensurate with the demand for such work. As the number of graduate students has increased, especially of candidates for advanced degrees, the courses of study have been extended to meet their needs. No set courses of study leading to any of the advanced degrees are provided; each candidate for one of these degrees pursues an independent line of study, in which regular University courses are usually combined with special research work, original in character, laid out with the advice of the professors, and carried out under their direction.

The elastic nature of the elective system as here adopted, renders the more advanced courses in many branches as valuable to the graduate as to the advanced undergraduate. The Seminaries, for instance, hold out encouragement and opportunities for a great deal of original study and research. The same thing may be said of a number of the higher courses in the different departments. In the following pages will be found grouped together those courses which are of special interest to graduates. In every case courses intended for graduates only (B) are distinguished from those open also to undergraduates (A). To the former, undergraduates are admitted only under exceptional circumstances and subject to the discretion of the professor in charge of the work.

LATIN LANGUAGE AND LITERATURE.

A. Courses open to graduates and undergraduates.

Courses 5, 6, 15, 17. See pp. 38, 39, 40. Professor CURRIER.

Courses 7, 8, 9, 10, 11, 12, 13, 14. Loc. cit. Assistant Professor POTTER.

Courses 1 to 4, or an equivalent, are the minimum prerequisite for work leading to an advanced degree.

B. Course open to graduates only.

16. **Seminary in Archæology.** For 1899–1900 the subject will be the Topography and Archæology of Rome and the vicinity. Professor CURRIER.

GREEK LANGUAGE AND LITERATURE.

A. Course open to graduates and undergraduates.

6. **Plato's Gorgias, Theætetus,** and selections from the Republic.

B. Course open to graduates only.

7. **Aristophanes.** Special attention will be given to the purpose and influence of Greek comedy, and to its value as a picture of Athenian life.

GERMAN LANGUAGE AND LITERATURE.

A. Courses open to advanced students and graduates only.

5. **German Seminary.** This course is devoted to the study of special periods of German literature, of individual authors, or of particular literary movements. See page 43. Professor WILSON.

6. **Middle High German.** Middle High German Grammar, with a comparison of New High German Syntax and Middle High German Syntax. Selections from the Nibelungenlied, Gudrun, and the poems of Walther von der Vogelweide. See page 43. Professor WILSON.

7. **Old High German.** Braune's Althochdeutsche Grammatik and Althochdeutsches Lesebuch; Müllenhoff and Scherer's Denkmäler. Professor WILSON and Dr. EASTMAN.

Throughout the year, two hours a week; time to be arranged.

8. **The German Romantic Movement,** with special reference to its social and political aspects. Professor WILSON and Mr. STURM.

Throughout the year, two hours a week; time to be arranged.

FRENCH LANGUAGE AND LITERATURE.

A. Courses open to graduates and undergraduates.

4. **History of French Literature.** Lectures in the French language. Text-books: Aubert's Littérature française; Montaigne's De l'Institution des Enfans. Professor VAN STEENDEREN.

8 and 9. **Seminaries in French Literature** of the 17th and 19th Centuries. Professor VAN STEENDEREN.

ENGLISH LANGUAGE AND LITERATURE.

A. Courses open to graduates and undergraduates.

During the year 1899-1900 candidates for the master's degree may take work in the following Senior courses:

8. **Seminary in Shakespere.** See Course 8, under English, page 47. Professor REEVES.

7. **Nineteenth Century Poetry and Prose.** See Course 7, p. 47. Professor REEVES.

B. Course open to graduates only.

11. **Gothic and Old Saxon.** See Course 11, p. 47. Professor REEVES.

HISTORY.

A. Courses open to graduates and undergraduates.

7. **The French Revolution, and Napoleonic Era.** Lectures. Fall and winter terms. Two hours a week. Professor WILCOX.

8. **The Nineteenth Century History of Europe.** Lectures. Spring term. Two hours a week. Professor WILCOX.

6. **Constitutional History of the United States.** Lectures. Three hours a week. Professor WILCOX.

9. **Seminary in English History.** Three terms. Two hours a week. Professor WILCOX.

10. **Seminary in United States History.** Three terms. Two hours a week. Professor WILCOX.

Special research work is also provided for those who intend to take the master's degree in History as the major study. This work is conducted personally by the Professor of History and, in each case, is along the lines of the candidate's dissertation for the degree.

B. Courses open to graduates only.

11. **Seminary in the French Revolution.** Two hours a week. Professor WILCOX.

This consists, so far as possible, in a critical and comparative study of original sources. Controverted points receive special attention.

12. **Seminary in the Period of Napoleon.** Three terms. Two hours a week. Professor WILCOX.

POLITICAL SCIENCE.

POLITICAL ECONOMY.

A. For graduates and undergraduates.

9. **Economics,** advanced course. A study in economic theory, historical and critical, as described under Course 9, on page 53. Throughout the year; Mon., Th., at 2:30. Professor LOOS.

4. **Statistics.** For description of this course see Course 4, on page 52. Dr. PATTERSON.

5 and 6. **History of Political Economy and Modern Social Questions** A course in the history of political economy, before and including Adam Smith, followed by an analysis of the industrial revolution at the close of the eighteenth century with lectures on the rise of the classical school of political economy, modern socialism, contemporary economic schools, and recent tendencies in legislation. Throughout the year at 10. Professor LOOS.

7. **Economic Policy.** The courses in public finance, currency and banking, transportation, diplomacy and foreign relations, described in the undergraduate statement, on pp. 52–53, as Courses 3, 4, 7, 8, and 9, with such additional work as may be prescribed. Open only to those who have a fair knowledge of economic theory. Throughout the year. Professor LOOS.

SOCIOLOGY AND POLITICAL PHILOSOPHY.

A. For graduates and undergraduates.

11. **Sociology.** Part I. A study during the fall term of the primary factors and forces of social phenomena, with introductory lectures on anthropology and ethnology; special attention is given to the earliest phases of political organization. Part II. Lectures during the winter term on police, sanitation, pauperism, and crime; this will be followed in the spring term by a study of municipal government, with special attention to social problems. Throughout the year, Mon., Wed., Fri., at 10. Professor LOOS.

B. Primarily for graduates.

14. **Political Philosophy.** A study in political philosophy, classical

and modern, with some notice of state forms and the elements of legal history. Professor LOOS.

Throughout the year; hours to be appointed.

GOVERNMENT AND ADMINISTRATION.

A. Courses open to graduates and undergraduates.

8 and 9. Political Theory and Comparative Constitutional Law. A study of the more general and theoretical aspects of political phenomena. Fall term: Political Theory. Winter term: Comparative Constitutional Law. Spring term: Papers on special topics in political theory and comparative constitutional law. See above, Politics III, page 55. Professor SHAMBAUGH.

6. American Political Theory. A study in the history of political theory in the United States, wherein the writings of Hamilton, Madison, Washington, Jefferson, John Adams, Clay, Webster, Calhoun, and Lincoln will be read and discussed. Professor SHAMBAUGH.

Throughout the year, Tu., Th., at 9.

11. Administrative Law. A comparative study of administrative law in France, Germany, England, and the United States. One term, two hours. Professor SHAMBAUGH.

PHILOSOPHY.

A. Courses open to graduates and undergraduates.

7. History of Philosophy. A course in Greek, mediæval, and modern philosophy. Lectures, with assigned readings in the texts of Zeller, Weber, Falckenberg, and Erdmann. Professor PATRICK.

Throughout the year, Mon., Wed., Fri., at 11.

5. Laboratory Course in Experimental Psychology. A theoretical and practical course in psychological experiment. The exercises are so arranged as to familiarize the student with the methods and the apparatus of typical experiments in each of the approved lines of psychological research. The students perform the experiments and report and discuss the results and literature on each subject. Laboratory work and reports. Dr. SEASHORE.

6. Abnormal Psychology. Hypnosis, sleep, alterations of person-

ality, automatism, hallucinations, and the psychology of the abnormal and defective classes will be discussed. Lectures, with required reading. Dr. SEASHORE.

B. Graduate Courses.

9. **Special Research in Psychology.** Original investigations of special problems in psychology. Laboratory work and theses. The results of these investigations, if of sufficient worth, will be published in the *University of Iowa Studies in Psychology*. Dr. SEASHORE and Professor PATRICK.

8. **Seminary in Philosophy.** Papers and discussions upon special problems in philosophy. Professor PATRICK.

10. **The Development of the Mind.** A course in genetic psychology. Instruction in comparative psychology. Methods and results of psychological experiments upon children. Laws of mental development. Dr. SEASHORE.

PEDAGOGY.

A. Courses open to graduates and undergraduates.

2. **Philosophy of Education.** It is the purpose in this course to set forth the aims of education, and the laws upon which mental development depends; to treat in some detail the educational doctrines and theories that have become or promise to become effective in determining the trend of school practice; and to devote some time to the application of the laws of mental development to the selection and arrangement of the materials of instruction. Professor MCCONNELL.

6. **School Systems.** This course will require of the students an examination of the state and the city systems of the United States. Lectures and reports. Professor MCCONNELL.

7. **Child Study.** In this course the history, literature, and methods of work in child study will be treated. Professor MCCONNELL.

Graduate students in these courses will be required to make, in addition to the work expected of undergraduate students, a special study of one or more of the subjects included in the course selected.

B. Courses open to graduates only.

8. **Public School Conditions.** This course will consist of concrete

studies of public school conditions, and will be statistical and descriptive. It will be taken as individual work and will be under the direction of Professor McCONNELL.

9. **Elementary Education in Germany.** In this course the student will be required to make a special study of the application of the Herbartian principles in the elementary schools of Germany. The student must be able to read German. Professor McCONNELL.

PHYSICS.

A. Courses open to graduates and undergraduates.

6. **Special Investigation or Research,** to follow Courses 4 and 5, page 64. Professor VEBLEN and Mr. BOWMAN.

7. **Theory of Direct Current Dynamos and Motors.** Professor VEBLEN.

8. **Theory of Electricity.** Direct currents twice a week. Professor VEBLEN. Alternate currents three times a week. Mr. BOWMAN.

9. **Alternate Current Machinery.** Polyphase current machines, twice a week. Professor VEBLEN. The transformer, three times a week. Mr. BOWMAN.

13. **Heat and Thermodynamics.** Mr. BOWMAN.

15. **Seminary.** Systematic and critical reading of physical journals. Meetings every week through the year. Professor VEBLEN.

B. Courses open to graduates only.

The physical laboratory affords opportunity for such special work and research as may be desired for additional minor and major courses. Work may be laid out in any special line for those who wish, and will include both experimental and theoretical treatment of the branches chosen. For those who prefer it a general major course in physics will be arranged by a suitable selection from the different courses offered.

CHEMISTRY.

A. Courses open to graduates and undergraduates.

6. **Theoretical and Physical Chemistry.** This course consists of lectures and laboratory work, and comprises an experimental study

of cryoscopic, ebulioscopic, and vapor density methods for the determination of molecular weights, of the speed of chemical reaction, of the coefficients of chemical affinity, and of other problems of like character. Only in even numbered years. Professor ANDREWS.

5. **Advanced Quantitative Analysis.** Professor ANDREWS.

10. **Crystallography.** Lecture and laboratory course in crystallography and crystal measurements. Mr. WALKER.

B. Courses open to graduates only.

11. **Research Work.** Organic chemistry. Professor ANDREWS.

12. **Research Work.** Physical and inorganic chemistry. Professor ANDREWS and Mr. WALKER.

ANIMAL MORPHOLOGY AND PHYSIOLOGY.

A. Courses open to graduates and undergraduates.

The following courses are offered to graduate students who elect work in morphology as a minor. The completion of undergraduate Course 1, or its equivalent, is a prerequisite.

2. **Comparative Histology.** A general course of laboratory work on the histology of animal tissues and sytems of organs. Professor HOUSER and Mr. LAMBERT.

3. **Comparative Neurology.** This is a specialized course for the detailed study of the nervous system. Lectures and laboratory work. Professor HOUSER and Mr. LAMBERT.

4. **Vertebrate Embryology.** A laboratory course, accompanied by a series of lectures, for the study of the frog's egg and the development of the chick. Professor HOUSER and Mr. LAMBERT.

B. Open to graduates only.

7. **Research Course.** Facilities for original investigation will be provided for those who elect work in this subject as a major. The specific character of such work will be determined by individual needs and preferences, but, in general, a biological problem will be assigned for independent investigation through the use of refined laboratory methods. Candidates for this work are supposed to have a biological training at least equivalent to that provided by undergraduate Courses 1, 2, 3, and 4. Professor HOUSER.

ZOOLOGY.

A. Courses open to graduates and undergraduates.

7. **Lectures in Speculative Zoology.** Two hours a week. This course is devoted to a presentation of the more prominent theories concerning the origin and evolution of animal forms and a historical review of the position held by the most prominent workers in speculative zoology. Special attention will also be paid to a study of the habits, instincts, and intelligence of animals. The course will continue through the year. Professor NUTTING.

8. **Thesis.** Equivalent to two terms' work. Advanced work in any group of animals of which the museum contains a sufficient series. Free access to any specimens or books on the museum floor is accorded to students doing thesis work in zoology. Professor NUTTING.

B. Courses open to graduates only.

9. An exhaustive systematic discussion of any limited group of animals of which the museum affords sufficient material and the library sufficient literature.

In several groups such as birds, echinoderms, mollusca, crustacea, coleoptera, and cœlenterata, the museum can now offer facilities for the most advanced systematic work, both the material and literature being adequate.

10. Special investigation along the line of speculative zoology, e. g., coloration of animals, geographical distribution, variation, natural selection, etc.

GEOLOGY.

A. Courses open to graduates and undergraduates.

3. **Invertebrate Paleontology.** Course 3, described on page 72, is offered to graduate and undergraduate students who have previously taken Course 2. This course can only be taken as a minor by candidates for the master's degree. Professor CALVIN.

4. **Economic Geology** of the United States may be taken on the same terms as 3.

B. Courses open to graduates only.

6. Graduate students who elect geology as a major will be assigned

work involving original research in some branch of geology or paleontology. This work may embrace such subjects as describing and mapping the geological formation of some selected area, Pleistocene geology of some country or group of countries, the stratigraphic distribution of the fauna of a given geological formation, the critical study of certain selected geological faunas, the geological and geographical range of certain zoological groups of organisms, or the evidence of evolution in successive geological fauna. Throughout the year, daily. Professor CALVIN.

BOTANY.

A. Courses open to undergraduates and graduates.

Courses 5, 6, 7, 9, and 10, as described on pp. 72 to 74, are open to graduates who may select botany as a minor. The completion of Courses 1, 3, and 4, as described on pp. 72, 73, or the equivalent, is presupposed in all cases.

B. Courses are open to graduates only.

12. **Histology.** The preparation and critical study of material illustrative of the structure of some special group of either sporophytes or spermaphytes, or the critical study of some special organ or tissue as developed in different plant groups. Professor MACBRIDE and Assistant Professor SHIMEK.

13. **Physiology.** Practical experimentation in laboratory and field, with the object of solving, so far as may be practicable, some physiological problem as presented in the case of a selected plant or group of plants; or the critical study of the function of some special organ, or group of tissues. Other topics may be found in research relative to the effect of environment, cross and self-fertilization, etc., in the matter of the distribution and differentiation of species, laws of heredity, and kindred problems. Professor MACBRIDE and Assistant Professor SHIMEK.

14. **Systematic Botany.** Comparative study of the species of plants found in special geographic areas in connection with an investigation of the laws governing geographic distribution; studies of special, natural orders of plants, cryptogamic or phenogamic, with reference to their taxonomy, relationships, distribution, etc.; comparative studies of plants of economic importance, their relationships and history; studies

in problems of local forestry, especially as related to conditions found in the Mississippi valley. Professor MACBRIDE and Assistant Professor SHIMEK.

MATHEMATICS.

The courses outlined below are offered to graduate students.

5. **Integral Calculus.** Hyperbolic functions, definite integrals, including the *beta* and *gamma* functions and elliptic integrals. Lectures throughout the year. Professor WELD.

6. **Harmonic Functions.** Lectures throughout the year. Professor WELD.

7. **Differential Equations.** Lectures throughout the year.

8. **Determinants and Modern Geometry.** This course is supplemented by a fortnightly Seminary.

9. **Analytical Mechanics.** Statics; dynamics; the mechanics of fluids. This course is supplemented by a weekly Seminary, Assistant Professor SMITH.

10. **Advanced Mechanics.** Virtual velocities, the principle of least action; dynamics of a particle with reference to the theory of orbital motion; hydromechanics. Lectures throughout the year; supplemented by a weekly Seminary. Assistant Professor SMITH.

Further details regarding the above courses will be found on pages 76 and 77.

It is to be noted that in each of the courses a knowledge of the elements of the differential and integral calculus is implied. Graduate students in other lines of work may, however, take as a minor either of the two elementary courses in calculus offered to undergraduates. See Courses 3 and 4, page 76.

The courses in mathematics cannot, in general, be taken *in absentia*.

The following schedule is recommended to those wishing two years of graduate work:

First year: Review elementary calculus; integral calculus; analytical mechanics; minor, subject to the approval of the Faculty. See pp. 76 and 77.

Second year: Differential equations or harmonic functions; deter-

minants and modern geometry; advanced mechanics; minor, subject to the approval of the Faculty. See pp. 76 and 77.

Each candidate for a degree will be required to submit a thesis representing original investigation in either pure or applied mathematics.

ADVANCED DEGREES.

Master of Arts, and Master of Science. The degree of Master of Arts, or of Master of Science, will be conferred upon resident graduates on the following conditions:

1. The candidate must be a graduate of this University, or of an accredited University or College.

2. He must have pursued, during one or more years, a course of graduate study at this University, covering one major and one minor subject. In a two years' course, one major, and two minors, may be allowed. His studies during this time are to be under the immediate supervision and control of the professors immediately concerned, and to be subject to the approval of the Faculty.

3. In all cases, the minor, or minors, must be closely allied to the major subject.

4. He must submit a thesis of at least 5,000 words, showing marked attainment in some branch of learning. The subject of this thesis must be announced to the Faculty for approval, not later than the second Friday in December, and the thesis itself must be presented to the examining committee at a date to be set by the professor in charge of the thesis work, not later, in any case, than May 20th of the year in which the degree is expected.

5. He must, at the close of his course, pass a satisfactory examination, both oral and written, conducted by a committee which shall consist of three professors, selected by the Faculty for this purpose.

6. The degree of Master of Arts may be granted only upon the completion of a course mainly literary in character; the degree of Master of Science after one mainly scientific.

7. No graduate student, carrying full work in any professional department of the University, is permitted to receive the master's degree in less than two years after becoming a candidate.

8. Any graduate student in any professional department of the

University, doing actual resident work in the Collegiate Department, may become a resident candidate for an advanced degree; but two years of such residence shall be necessary to fulfil the residence requirement of one year imposed by rule 2 above, the residence to be counted only from the date of the application for the advanced degree.

Non-resident graduates may receive the degree of Master of Arts, or of Master of Science, on complying with the following conditions in addition to or modifying those enumerated for residents.

1. The candidate will be required to outline a course of study, comprising a major and one allied minor subject, which must be approved by a committee of two or more professors named by the Faculty to pass upon it.

2. He shall at the close of each academic year present to the Faculty a report, which should constitute a complete synopsis of the year's work, naming topics studied and authors read. These annual reports are expected to be specific and comprehensive.

3. His graduate studies must extend over three years; although in exceptional cases, where the candidate devotes a large part of his time to study, a shorter course, but in no case less than two years, may be accepted.

4. Candidates for the master's degree who have graduated elsewhere are required to spend at least one year in residence at this University.

Civil Engineer. The degree of Civil Engineer is not conferred upon completion of an undergraduate course in engineering, but instead thereof, the degree of Bachelor of Science in Civil Engineering. The degree of Civil Engineer will be conferred on graduates who have practiced the profession at least three years, and who have submitted an approved thesis, and passed a satisfactory examination.

Doctor of Philosophy. The degree of Doctor of Philosophy will be granted under the following conditions:

I. Prerequisites.

1. The candidate must have received the bachelor's degree either from this institution or from some other of equal rank.

2. He must present evidence of having completed a satisfactory amount of undergraduate work in the subjects proposed for investigation for this degree.

3. He must possess a knowledge of French and German at least sufficient for purposes of research.

II. Conditions of candidacy.

1. At least three years of graduate study will ordinarily be required. Of these two must be in residence, and the last year prior to receiving this degree must be spent at this University.

2. In making formal application for this degree the candidate shall select one major study and one or two minors; the minor study or studies shall be closely allied to the major and shall be such as with it to constitute but one single field of research.

3. The application of the candidate setting forth the line of research proposed shall be approved and endorsed by the professor or professors under whose direction it is proposed to prosecute the work.

III. Dissertation.

1. On completion of his work the candidate shall submit to the Faculty a formal dissertation which shall not only exhibit evidence of original research but shall in itself be a contribution to the sum of human knowledge.

2. The dissertation must be in acceptable literary form; although its acceptance will depend chiefly upon the subject matter.

3. The subject of the proposed dissertation must be submitted to the Faculty not later than the last Friday in September of the year preceding that in which the degree is expected; and a copy of the dissertation, printed or type-written, must be in the hands of the Secretary of the Faculty not later than the 20th day of May of the year in which the degree is expected. In case the dissertation offered is accepted by the Faculty and the candidate passes satisfactorily the examinations, provided for in the next section following, he shall, prior to receiving his degree, deposit with the librarian of the University twenty-five printed copies of the dissertation so accepted.

IV. Examinations.

1. At such time as may be agreed upon by the candidate and the professors in charge of his work, he shall pass an examination, both oral and written; the examination to be conducted by the professors immediately concerned, the written privately, the oral in the presence of the Faculty. For purposes of this examination five members of the Collegiate Faculty shall constitute a quorum.

MATERIAL EQUIPMENT.

LABORATORIES.

CHEMICAL LABORATORY.

THE chemical laboratory occupies two stories in the Chemical Building. This space is divided into twenty-five rooms, designed in such a way as to afford facilities for the prosecution of a wide range of chemical work.

The general laboratory is a room 100 feet long by 27 feet in minimum breadth, lighted from one side only by ten large windows. In this and all other rooms of the building provision has been made for perfect ventilation by the construction of numerous air flues. The building is heated by steam, which will also be freely used for chemical purposes, as for drying-ovens, distillation, etc.

The lecture hall is built in amphitheater form with raised seats. It will accomodate nearly two hundred students, every one of whom can clearly see the lecture table and any experiment that may be performed there, even from the most distant part of the room.

The size of the building on the ground is 150 x 105 feet. In all the rooms cross lights have been avoided, and in every respect the designer and the architect have spared no pains to meet every reasonable demand in the construction of a thoroughly modern and substantial structure adapted as perfectly as means would admit to its special uses.

A storage battery and dynamo in connection with a gas engine furnish the electricity to the various laboratories for electrolysis and other uses. Especial facilities in the way of apparatus are provided for the study of physical chemistry.

PHYSICAL LABORATORY.

The physical laboratory occupies the first floor and basement of the North Building, with an available floor space of more than 8,000 square feet.

In the basement is the large engine and dynamo room containing a gas engine which drives a shaft twenty feet long. To this shaft are belted the dynamos, of which there are six of from one to ten horse-power capacity, and representing several types. Here also is a cable switch-board, meters, lamps, and other apparatus. In this room, and driven by the same engine, are three lathes, a planer, drill-press, forge and the usual tools for working metal. In the battery room are some 45 accumulators of different varieties. A large and commodious photometer room is supplied with a complete Kruess photometer. One basement room has been equipped as an electrical laboratory. Another room is supplied with a cabinet-maker's bench and a few wood-working tools.

On the floor above are eight rooms. The lecture room, with seats for some 70 students, is supplied with water and gas and with wires from the dynamos and the accumulators. The windows can be easily darkened, and there are conveniences for making projections by sunlight or by electric or other artificial light. A large and well lighted room is devoted to the uses of a general laboratory, especially in the line of mechanics, and contains a number of balances, air-pumps, a cathetometer, and a number of other measuring instruments. Another large room contains much of the apparatus for electrical testing. Here also is the special physical library with the journals taken for the laboratory. Three smaller rooms are given respectively to heat, light, and magnetism, and are well equipped with apparatus. There are also two offices, for the professor in charge and the assistant professor.

The laboratory is fairly well supplied with lecture apparatus; and among the instruments of precision are many of the best and finest to be had. The equipment is especially full in mechanics, optics, and electricity. Most of the apparatus has been purchased in recent years, and has been selected with great care; and some has been constructed for particular uses in this laboratory.

LABORATORIES FOR ANIMAL MORPHOLOGY AND PHYSIOLOGY.

The laboratories for animal morphology and physiology occupy the west half of the first floor of the Natural Science Building, together with a portion of the basement. They are supplied with water and gas throughout, and are lighted by twenty windows.

The laboratory for the course in general morphology receives light from the north. It is furnished with heavy oak, slate-topped tables, particularly adapted to the anatomical and microscopical requirements of the work. The tables will accomodate thirty students at one time.

The equipment of this laboratory includes thirty compound microscopes, the requisite accessory optical apparatus, a series of over seven thousand microscopical slides, a large number of anatomical preparations, charts and models, and the numerous pieces of minor apparatus, glassware, etc., incident to general biological work.

The laboratory for the several advanced courses is lighted from the west and south. It is furnished with tables and reagent racks designed to meet the special requirements of the work pursued here. A smaller room opening from the main one supplies the conditions desired for apparatus of constant temperature. The equipment of this laboratory embraces special microscopes, sliding microtomes of approved pattern, a Minot automatic microtome for serial sectioning, a large Lillie water bath for paraffin imbedding, a laboratory incubator for work in embryology, a thermostat of ample size, a complete stock of biological reagents, set of reagent bottles for each student, a large assortment of glassware, and various pieces of physiological apparatus.

Opening from the main laboratories are smaller rooms available for those pursuing special lines of investigation. The basement laboratory is utilized for aquaria, anatomical tanks, animal cages and appliances for various lines of special work.

LABORATORIES FOR GEOLOGY AND PALEONTOLOGY.

The material for illustrating the work in geology and paleontology embraces:

1. The museum collection of rocks, clay, building stones, minerals, and fossils.

2. A large series of maps, charts, lantern slides, photographs, and geological models.

3. A lithological lathe for making rock sections, or sections to illustrate the structure of ancient forms of animals and plants.

4. Petrographical microscopes.

5. Photographic apparatus, including a large photomicrographic camera.

6. A large series of negatives from which the students make prints to illustrate their permanent note books.

7. Geological phenomena illustrated within easy reach of Iowa City.

The surrounding neighborhood affords many instructive examples of phenomena of interest to the student of geology. At the same time it offers unexcelled opportunities for field work in mapping, making geological sections, tracing strata from one exposure to another, and making paleontological collections. The Pleistocene deposits are of especial interest. The available material is not only sufficient to illustrate the ordinary undergraduate courses in geology, but advanced students will find enough to occupy their time with profit for two or more years.

BOTANICAL LABORATORY.

This laboratory is located on the second floor of the Natural Science Building, and is in direct communication with the herbarium. It is supplied with heavy oak, slate-topped tables, furnished with drawers and cases for the instruments used in microscopic work, and is arranged to accommodate thirty students at one time. Thirty compound microscopes, with necessary accessories, section-cutters, etc., are at the disposal of the students.

Connected with the main laboratory are private laboratories for students pursuing special lines of investigation. Two of these are furnished with special miscroscopes, a photomicrographic camera, and apparatus for investigation in vegetable physiology.

A fine stereopticon, the joint property of this and the geological laboratory, is a recent addition to our general equipment. These laboratories are well lighted, and in every way adapted to satisfactory work.

PSYCHOLOGICAL LABORATORY.

The psychological laboratory occupies the lower floor of the brick building, No. 14 North Clinton street, facing the campus. It includes a commodious lecture room, library and reading room, in addition to three quiet, well-lighted rooms for laboratory work, and a dark room.

The thorough equipment of the laboratory with apparatus and needed accessories offers excellent opportunity for the study of the different senses, memory, illusions, time relations of mental phenomena, and the nervous system.

A partial list of apparatus is as follows: A complete set of instruments for studying the time relations of mental phenomena by the graphic method, this set, excluding the smaller necessary accessories, comprises the following pieces: a recording drum, three induction coils, various kinds of batteries, multiple key, reaction keys, five-finger reaction key, graphic chronometer with electro-magnetic attachment, rheocord, 100 v. d. electro-magnetic tuning-fork, double contact electro-magnetic tuning-fork, time markers, automatic contact, galvanometer, condenser, touch key, switches, commutator, telephone-receivers, Geissler stimulator for sight reaction, pendulum circuit interrupter, instantaneous exposure apparatus, slide inductorium, foil apparatus and speed counter. A spark chronoscope and Jastrow's sorting apparatus have recently been added. For the study of taste and smell: several varieties of olfactometers and gustatory apparatus. For touch, muscle sense, temperature and kindred phenomena: three sets of muscle sense weights, loaded boxes for the study of the psychophysic law and weight illusions, two sets illusion blocks, steadiness gauge, von Frey's pressure balance, æthesiometers, hot and cold spot apparatus; balance scale, five dynamometers, ergograph, algometer, Marey tambours, thought-action apparatus, foil, muscle-memory apparatus, voluntary motor recorder, spirometer and set of touch weights. For hearing: siren, sound pendulum (by Krille), series of 22 Koenig cylinders for highest audible tone, Galton whistle with manometer and blower, Appunn's reed, set of tuning-forks with resonance boxes for illustrating harmony, beats and sympathetic vibration, two sets of forks for discriminations of pitch, metronome, two audiometers, two pitch pipes, sonometer, stroboscope for study of pitch differences.

For sight: rotation apparatus with Maxwell color disks for illustrating mixing of colors, color contrast, etc., contrast apparatus, two tachistoscopes, Ewald's pseudoscope, apparatus for testing color blindness, Rothe's color-wheel with disks, Bradley's pseudoptics, two photometers, binocular and monocular apparatus, eye-muscle apparatus, dark box, apparatus for outlining the blind spot, zootrope, perimeter, the latest model of the Zimmerman kymograph and zeitsinn apparatus, a plethysmograph, a pneumograph, and a sphygmograph are used in the study of rhythm, etc.

In addition to the apparatus enumerated above, numerous other pieces for demonstration purposes might be mentioned. The study of the nervous system is illustrated by about one hundred charts in addition to various models, including Auzoux's dissectible model of the brain, ear models, eye models, a compound microscope, a dissecting microscope, slides of the nervous system, ophthalmotrope, nerve-muscle machine, etc.

The workshop, fitted out with lathe, work bench, and necessary tools, mimeograph, dissecting apparatus, etc., forms an indispensable adjunct to the laboratory.

ASTRONOMICAL OBSERVATORY.

The students' astronomical observatory is conveniently located on the University campus. It is furnished with a five-inch equatorial telescope by Grubb of Dublin, having circles, driving clock, position micrometer, helioscope, and a solar and stellar spectroscope, a transit instrument by William Wuerdeman of Washington, a prismatic sextant, and artificial horizon by Pistor and Martins of Berlin, clock chronometer, chronograph, etc.

The mathematical and astronomical library comprises over one thousand volumes, including many rare and valuable works. The periodical literature devoted to these branches of science is also well represented.

CIVIL ENGINEERING LABORATORIES AND DRAUGHTING ROOMS.

The hydraulic laboratory is a room having a floor space of 575 square feet. The equipment for 1899-1900 will include the necessary tanks

with standard orifices, tubes and weirs for free and submerged flow, hook gauge, water meters of various kinds, pressure gauges, and other necessary appliances for illustrating hydraulic principles; also a Price's pneumatic current meter for field gaugings.

The cement laboratory contains a Riehle 1,000 pound cement tester, a Fairbanks automatic shot-stop cement tester of same capacity, briquette making machine of the Sims and S. U. I. type, and all necessary tanks, mixing sinks, molds, etc., for making complete tests of cement.

The iron, steel, and wood laboratory contains an autographic testing machine and a 100,000 pound Riehle machine.

The draughting rooms are well lighted and equipped with all necessary appliances.

The department is provided with a field equipment ample to permit full and complete practice in the different kinds of surveying; this equipment consists of a vernier compass, a railroad compass, a solar compass, levels and transits, with stadia, gradienter and Saegmullar solar attachment, also a plane table of the latest approved form with best telescopic alidade and all necessary attachments, together with all the rods, flags, chains, tapes, etc., that are necessary to equip fully the various classes and divisions in surveying without interfering with each other in their work.

The engineering library consists of over 500 volumes of the standard works on the various engineering subjects; these books are selected from and are a part of the general library, but are arranged in a convenient room adjacent to the drawing rooms, and are freely used by the engineering student. All the best engineering journals and periodicals are received, bound, and kept on file.

Each engineering student is eligible for membership in the Engineering Society. This society meets each week, and papers upon engineering subjects are prepared and read by the students.

An engineering journal, *The Transit*, is published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering problems by undergraduate students and alumni.

NATURAL HISTORY COLLECTIONS.

GEOLOGICAL COLLECTIONS.

1. A large series of minerals, building stones, fossils, earths, etc., collected chiefly in the prosecution of the State geological surveys, between the years 1856 and 1870. These collections are annually increasing by contributions from various sources.

2. The Calvin collection of American and European fossils.

3. A collection of cretaceous cycads from the Dakota sandstone of the Black Hills.

4. Recent extensive collections illustrating the cretaceous faunas and economic geology of the Black Hills.

5. A collection illustrating general economic geology.

A beautifully preserved skeleton of a Mosasaur, Platecarpus, has lately been added to the geological collections through the generosity of the Davenport Alumni Association.

HERBARIUM.

The herbarium is located in one room on the second floor of the Natural Science Building. It contains:

1. A very large and constantly increasing collection of fungi, chiefly saprophytic, from all parts of North and Central America. To be classed here is also a large collection of the myxomycetes from all parts of the world.

2. A large collection of ferns and mosses from both hemispheres, including an especially complete series from tropical America.

3. A collection of lichens, representing most of the species of the United States.

4. A collection of many thousand flowering plants, representing very fully the flora of North America, and especially rich in Central American and European forms. The number of plants in the herbarium exceeds 200,000.

5. A collection of seeds and dry fruits including cones, representing the flora of North America chiefly, but containing also much material from the tropics.

6. A collection of the principal woods of the United States.

University, doing actual resident work in the Collegiate Department, may become a resident candidate for an advanced degree; but two years of such residence shall be necessary to fulfil the residence requirement of one year imposed by rule 2 above, the residence to be counted only from the date of the application for the advanced degree.

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II. Conditions of candidacy.

1. At least three years of graduate study will ordinarily be required. Of these two must be in residence, and the last year prior to receiving this degree must be spent at this University.

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The lecture hall is built in amphitheater form with raised seats. It will accomodate nearly two hundred students, every one of whom can clearly see the lecture table and any experiment that may be performed there, even from the most distant part of the room.

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The thorough equipment of the laboratory with apparatus and needed accessories offers excellent opportunity for the study of the different senses, memory, illusions, time relations of mental phenomena, and the nervous system.

A partial list of apparatus is as follows: A complete set of instruments for studying the time relations of mental phenomena by the graphic method, this set, excluding the smaller necessary accessories, comprises the following pieces: a recording drum, three induction coils, various kinds of batteries, multiple key, reaction keys, five-finger reaction key, graphic chronometer with electro-magnetic attachment, rheocord, 100 v. d. electro-magnetic tuning-fork, double contact electro-magnetic tuning-fork, time markers, automatic contact, galvanometer, condenser, touch key, switches, commutator, telephone-receivers, Geissler stimulator for sight reaction, pendulum circuit interrupter, instantaneous exposure apparatus, slide inductorium, foil apparatus and speed counter. A spark chronoscope and Jastrow's sorting apparatus have recently been added. For the study of taste and smell: several varieties of olfactometers and gustatory apparatus. For touch, muscle sense, temperature and kindred phenomena: three sets of muscle sense weights, loaded boxes for the study of the psychophysic law and weight illusions, two sets illusion blocks, steadiness gauge, von Frey's pressure balance, æthesiometers, hot and cold spot apparatus; balance scale, five dynamometers, ergograph, algometer, Marey tambours, thought-action apparatus, foil, muscle-memory apparatus, voluntary motor recorder, spirometer and set of touch weights. For hearing: siren, sound pendulum (by Krille), series of 22 Koenig cylinders for highest audible tone, Galton whistle with manometer and blower, Appunn's reed, set of tuning-forks with resonance boxes for illustrating harmony, beats and sympathetic vibration, two sets of forks for discriminations of pitch, metronome, two audiometers, two pitch pipes, sonometer, stroboscope for study of pitch differences.

For sight: rotation apparatus with Maxwell color disks for illustrating mixing of colors, color contrast, etc., contrast apparatus, two tachistoscopes, Ewald's pseudoscope, apparatus for testing color blindness, Rothe's color-wheel with disks, Bradley's pseudoptics, two photometers, binocular and monocular apparatus, eye-muscle apparatus, dark box, apparatus for outlining the blind spot, zootrope, perimeter, the latest model of the Zimmerman kymograph and zeitsinn apparatus, a plethysmograph, a pneumograph, and a sphygmograph are used in the study of rhythm, etc.

In addition to the apparatus enumerated above, numerous other pieces for demonstration purposes might be mentioned. The study of the nervous system is illustrated by about one hundred charts in addition to various models, including Auzoux's dissectible model of the brain, ear models, eye models, a compound microscope, a dissecting microscope, slides of the nervous system, ophthalmotrope, nerve-muscle machine, etc.

The workshop, fitted out with lathe, work bench, and necessary tools, mimeograph, dissecting apparatus, etc., forms an indispensable adjunct to the laboratory.

ASTRONOMICAL OBSERVATORY.

The students' astronomical observatory is conveniently located on the University campus. It is furnished with a five-inch equatorial telescope by Grubb of Dublin, having circles, driving clock, position micrometer, helioscope, and a solar and stellar spectroscope, a transit instrument by William Wuerdeman of Washington, a prismatic sextant, and artificial horizon by Pistor and Martins of Berlin, clock chronometer, chronograph, etc.

The mathematical and astronomical library comprises over one thousand volumes, including many rare and valuable works. The periodical literature devoted to these branches of science is also well represented.

CIVIL ENGINEERING LABORATORIES AND DRAUGHTING ROOMS.

The hydraulic laboratory is a room having a floor space of 575 square feet. The equipment for 1899-1900 will include the necessary tanks

with standard orifices, tubes and weirs for free and submerged flow, hook gauge, water meters of various kinds, pressure gauges, and other necessary appliances for illustrating hydraulic principles; also a Price's pneumatic current meter for field gaugings.

The cement laboratory contains a Riehle 1,000 pound cement tester, a Fairbanks automatic shot-stop cement tester of same capacity, briquette making machine of the Sims and S. U. I. type, and all necessary tanks, mixing sinks, molds, etc., for making complete tests of cement.

The iron, steel, and wood laboratory contains an autographic testing machine and a 100,000 pound Riehle machine.

The draughting rooms are well lighted and equipped with all necessary appliances.

The department is provided with a field equipment ample to permit full and complete practice in the different kinds of surveying; this equipment consists of a vernier compass, a railroad compass, a solar compass, levels and transits, with stadia, gradienter and Saegmullar solar attachment, also a plane table of the latest approved form with best telescopic alidade and all necessary attachments, together with all the rods, flags, chains, tapes, etc., that are necessary to equip fully the various classes and divisions in surveying without interfering with each other in their work.

The engineering library consists of over 500 volumes of the standard works on the various engineering subjects; these books are selected from and are a part of the general library, but are arranged in a convenient room adjacent to the drawing rooms, and are freely used by the engineering student. All the best engineering journals and periodicals are received, bound, and kept on file.

Each engineering student is eligible for membership in the Engineering Society. This society meets each week, and papers upon engineering subjects are prepared and read by the students.

An engineering journal, *The Transit*, is published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering problems by undergraduate students and alumni.

NATURAL HISTORY COLLECTIONS.

GEOLOGICAL COLLECTIONS.

1. A large series of minerals, building stones, fossils, earths, etc., collected chiefly in the prosecution of the State geological surveys, between the years 1856 and 1870. These collections are annually increasing by contributions from various sources.

2. The Calvin collection of American and European fossils.

3. A collection of cretaceous cycads from the Dakota sandstone of the Black Hills.

4. Recent extensive collections illustrating the cretaceous faunas and economic geology of the Black Hills.

5. A collection illustrating general economic geology.

A beautifully preserved skeleton of a Mosasaur, Platecarpus, has lately been added to the geological collections through the generosity of the Davenport Alumni Association.

HERBARIUM.

The herbarium is located in one room on the second floor of the Natural Science Building. It contains:

1. A very large and constantly increasing collection of fungi, chiefly saprophytic, from all parts of North and Central America. To be classed here is also a large collection of the myxomycetes from all parts of the world.

2. A large collection of ferns and mosses from both hemispheres, including an especially complete series from tropical America.

3. A collection of lichens, representing most of the species of the United States.

4. A collection of many thousand flowering plants, representing very fully the flora of North America, and especially rich in Central American and European forms. The number of plants in the herbarium exceeds 200,000.

5. A collection of seeds and dry fruits including cones, representing the flora of North America chiefly, but containing also much material from the tropics.

6. A collection of the principal woods of the United States.

The herbarium collections, thanks to friends and collectors in various parts of the world, are steadily increasing in extent and value. It is hoped that private collectors will hereafter as heretofore find the University a proper place for the deposit and care of collections of plants.

In 1898 botanical expeditions were sent to various sections of the United States. The principal one of these was in charge of Mr. T. E. Savage, and was employed in Oregon and Washington; Professor B. Shimek spent some weeks in similiar work in Mississippi, and Mr. P. C. Myers in various parts of Iowa.

Special thanks in this connection are also due to E. W. D. Holway; A. P. Morgan, C. L. Smith, T. E. Lenocker, T. J. Fitzpatrick, F. Reppert, T. M. Holsinger, H. F. Wickham, Paul Bartsch, B. Fink, R. I. Cratty, J. E. Cameron, C. C. Stover, L. M. Cavanagh, Ellen Dubal, T. E. Savage, P. C. Myers, C. W. Irish, W. G. Farlow, E. Bethel, Katharine Vale, Columbian Museum, H. L. Jones, S. Calvin, Mae Webber.

MUSEUM OF NATURAL HISTORY.

The museum of natural history is rapidly growing, and is becoming more valuable through donations of material by friends of the University.

By the generosity of the collector, the fine Hornaday collection of mammals and birds has become the property of the University. This collection contains many rare forms of mammals and birds, and is particularly rich in typical exotic forms from India and Australia.

Mr. D. H. Talbot of Sioux City has donated to the University his extensive collection of natural history specimens and minerals. This collection contains many thousand specimens, being especially rich in mammals, birds, and anatomical preparations.

During the last ten years, expeditions for zoological explorations in the interest of the University have visited the following regions: Bahama Islands, Bay of Fundy, Rocky Mountain region, Pacific coast, Alaska, mountains of Tennessee, the Winnipeg country, Lake Athabasca, Great Slave Lake, the Arctic coast, Siberia, Cuba, Florida Keys, British West Indies, and the Bay of Naples.

An entire rearrangement of the museum has been undertaken, and a new system of labeling, cataloguing, and exhibiting has been adopted

with the intention of making the material of the utmost practical use to students of natural history.

A large library of reference for the use of students of zoology is placed on the museum floor, and a free use of all the material in the various collections is encouraged, for which purpose a cheerful and convenient study room has been provided for the use of students and specialists.

ZOOLOGICAL COLLECTIONS.

1. Mammals. A large series of mounted specimens is now on exhibition, the great majority being rare and valuable foreign species, including a series of marsupials, which surpasses anything of the kind west of the Alleghanies.

Besides the Hornaday collection, the museum contains a large number of native mammals, about forty specimens being from the Pacific coast. A complete series of the larger mammals of North America is now being secured through the kindness of Mr. D. H. Talbot, and the efforts of Mr. Frank Russell, who returned from the far North with an exceptionally fine series of the large mammals of that region, including five good specimens of the musk ox.

2. Birds. The ornithological material in the museum now embraces about 11,000 specimens, about 1,000 of which are exhibited in the mounted series, the remainder being included in the study series for the use of students and specialists.

Besides a large collection of native birds, containing nearly all the species found in Iowa, the following collections are noteworthy:

The Hornaday collection of birds, containing one hundred and twenty-five specimens, nearly all of which are exotics, and many, such as the ostrich and emu, of great value.

The Bond collection of birds of Wyoming, donated together with a large collection of Iowa birds, by Mr. Frank Bond of Cheyenne, Wyoming.

The Harrison collection of British game birds and birds of prey, a large and valuable series, donated by John Harrison, Esq., of England.

The Talbot collection of American birds, embracing thousands of specimens, mostly from the Mississippi valley.

A collection of 500 birds from the N. W. Provinces of British America, made by the Curator, Mr. Frank Russell, and Mr. A. G. Smith.

A collection of about 600 specimens of birds from the Winnipeg country, Great Slave Lake, Athabasca Lake, the Mackenzie River, and the Arctic coast, made by Mr. Frank Russell.

The Curator has donated his study series of over 800 bird skins from North and Central America, and the Bahama Islands.

3. Reptiles. The alcoholic collection of reptiles has received many important additions, among which may be mentioned a number of specimens from India, donated by Rev. A. Loughridge, and many native specimens presented by students. Ex-Regent B. F. Osborn has donated his large collection of alcoholic specimens, which consists principally of reptiles, thus nearly doubling the series of these forms.

4. Fishes. Assistant Professor B. Shimek has presented the museum with his entire collection of fresh-water fishes, of which the museum now has seven hundred specimens, besides a number of marine forms.

A collection of 135 species of the fresh-water fishes of Central and Western North America, has been donated to the University by the United States Fish Commission.

5. Insects. Assistant Professor Wickham is now engaged in assorting a large series of the coleoptera and lepidoptera of North America, which he has generously donated. All of the foreign coleoptera in this large collection are now the property of the museum.

6. Marine Invertebrates. A collection consisting of several thousand specimens of crustaceans, mollusks, star fishes, corals, sponges, etc., has been supplemented by a valuable series consisting of several hundred alcoholic specimens, many of which are the gift of the United States Fish Commission.

The alcoholic collection has been enlarged by marine forms collected during two expeditions to the Bahamas, Cuba, and the Florida Keys, and thousands of specimens have been added by collections made in the Bay of Fundy by Professors Calvin and Nutting.

A car load of marine specimens was secured by the Bahama expedition in 1893. This collection contains a large number of deep-water forms, thus giving the University special advantages in the matter of marine materials for exhibition and study.

A valuable series of marine forms of the more fragile and delicate kinds, such as medusæ, sea-anemones, etc., has been secured from the

Stazione Zoologica at Naples, where the most superb preparations of these beautiful forms are made.

7. Terrestrial and Fresh Water Mollusca. The Shimek collection of land and fresh-water shells, embracing nearly all the species known to occur in Iowa, together with many exotic species.

8. Osteological Preparations. A series of mounted skulls and skeletons, illustrating the osteology of typical series of vertebrates, is exhibited, and is of the greatest value to students of comparative anatomy and zoology. During the last year the skeleton of a large whale (*Balaena biscayensis*) has been received.

9. Ethnological Material, illustrating the handiwork of the Mound Builders, Pueblo Indians, Zunis, Moquis, Acomas, Mojaves, Crees, Dog Ribs, Metis, Kosmolliks, Piegans, Tchukchees, and Navajos, together with skulls and other remains of the ancient and modern inhabitants of America.

Mr. D. H. Talbot of Sioux City has added very largely to this department of the museum. Mr. Russell has been active in securing ethnological specimens illustrating the life and manufactures of the Crees, of other northern tribes of Indians, and of the Esquimaux.

GENERAL INFORMATION.

THE LIBRARY.

The Library comprises about 32,500 volumes. Much progress has been made in replacing the 25,000 volumes lost by fire in 1897, and large additions will be made during the coming year. About 160 periodicals, foreign and domestic, are regularly taken, and many newspapers of the state are generously contributed by their publishers. These are kept in the general reading-room and are accessible to all students during library hours.

The main room of the library is large and well lighted, and is open to students of all departments of the University from 8 A. M. till 12 M., and from 1:30 to 5 P. M., and from 7 to 9 P. M.

LITERARY AND SCIENTIFIC SOCIETIES.

The literary and scientific societies maintained by the Faculty and the students of the University afford an important means of general culture, scientific research, and literary and forensic training, and thus form a valuable element as well as an attractive feature in University life.

Of those conducted by the Faculty, the BACONIAN has for its object discussion of scientific questions, and the POLITICAL SCIENCE CLUB discusses questions in history, politics, economics, law, education, and ethics, while the WHITNEY SOCIETY is devoted to the field of language and literature and the methods of teaching these subjects.

The PHI BETA KAPPA SOCIETY elects to membership, on the basis of high scholarship, a certain number from the graduating class who have completed the Classical or Philosophical Course.

Among the purely literary societies are the TABARD, POLYGON, and IVY LANE. The IRVING INSTITUTE, the ZETAGATHIAN SOCIETY, the PHILOMATHIAN SOCIETY for young men, and the HESPERIAN SOCIETY and the ERODELPHIAN SOCIETY for young women, hold weekly meetings for improvement in debate, oratory, writing, and declamation.

There are also in the institution societies connected with the Engineering, Chemical, Law, and Medical Departments.

MUSICAL ORGANIZATIONS.

The University Glee Club, the Minstrels, the Military Band, the Mandolin Club, etc., afford opportunity for musical training and furnish entertainments.

THE LECTURE BUREAU.

The Zetagathian and Irving Societies unite to form a Lecture Bureau which furnishes a series of literary and musical entertainments.

THE ORATORICAL LEAGUE.

This association is made up of members of the Zetagathian, Irving, and Philomathean Societies, and is a member of the Northern Oratorical League, consisting of Oberlin College, Northwestern University, and the Universities of Wisconsin, Michigan, Chicago, and Iowa.

THE DEBATING LEAGUE.

This organization, composed of the Zetagathian and Irving Societies, carries on systematic training in debating through private practice and public contests. It has had public debates with the Universities of Minnesota and Chicago for some years, and will this year meet the Universities of Minnesota and Wisconsin.

ATHLETIC UNION.

For the encouragement and better management of athletic sports and games the students of the University have organized an Athletic Union to which the students of all departments and classes are admitted upon the payment of a nominal membership fee.

CHRISTIAN ASSOCIATIONS.

The Young Men's and Young Women's Christian Associations are the center of the religious life of the University and active factors in all forms of moral and Christian work properly within the scope of such organizations. All students of good moral character are invited to membership either active or associate. Through the exertions of these associations, Close Hall has been erected, mainly from funds contributed by the Faculty, students, and alumni of the University, and the citizens of Iowa City. It is a spacious and convenient building, containing a large assembly hall, gymnasium, reading rooms, reception rooms, and bath rooms. It is extensively used for the meetings of the associations, as well as for the social, literary, and class gatherings of the students.

Through the generosity of Hon. T. S. Parvin the social room of the Y. W. C. A., has been finely fitted out with furniture, cabinet, and pictures, as a memorial to his wife and daughter. A similar room for the Y. M. C. A., has been suitably furnished by Mr. W. D. Cannon, Jr., of Iowa City.

The Associations strive to be useful to all students in every feasible way. Members meet new students at the trains, aid them in securing suitable rooms and boarding places, hold receptions at the opening of the year and on various occasions, maintain an employment bureau, and issue for free distribution a Student's Handbook containing

information of interest and value to the whole student body. The General Secretary is glad to be helpful to students on all occasions.

HOSPITALS.

The two Hospitals connected with the University afford the best care and treatment for students seriously ill. Provision for free beds for students is commended to the attention of generous friends of the University.

UNIVERSITY PUBLICATIONS.

Natural History Bulletin. The laboratories of natural history inaugurated in 1888 the publication of bulletins for the purpose of preserving a record of the work prosecuted along the lines of botany, geology, and zoology. Four volumes have thus far appeared in sixteen numbers, and material for the fifth volume is ready for publication. This may be expected during the next eighteen months. The numbers have a large circulation and are sent *gratis* to all correspondents from whom the University receives an equivalent, either in publications or material. To others the price is 50 cents a number. Address the Secretary of the University.

The Transit. An engineering journal, *The Transit*, is published annually by the University. It is edited by the members of the Engineering Society, and contains the results of original research in engineering problems by undergraduate students and alumni.

Studies in Psychology. This is an annual publication devoted to experimental psychology, begun in 1897. It contains the results of original research by the students and instructors in the psychological laboratory.

Documentary Material Relating to the History of Iowa. These publications contain documentary material illustrative of the history and politics of the commonwealth of Iowa. The series is edited by the professor of government and administration.

STUDENT PUBLICATIONS.

The Vidette-Reporter. A tri-weekly newspaper.

The Quill. A weekly literary publication.

The Hawkeye. A University annual published by the Junior class.

UNIVERSITY EXTENSION.

The University recognizes in the University Extension movement an agency of great value in education. It invites correspondence from communities which may desire to organize lecture courses on literary and scientific subjects, and will to the extent of its ability meet the desires of these communities. Lecture courses covering a wide range of subjects are offered by members of the University Faculties. Printed matter explaining the work offered by the University, including syllabi of lecture courses, is published by the University, and can be secured by addressing the Director of University Extension.

PRIZES.

PECK PRIZES.—Mr. F. W. Peck of Chicago has established for the Northern Oratorical League prizes of $100 and $50 to be given to the first and second honor men in the annual contests.

PICKARD PRIZE.—A prize of $20 was offered last year by Dr. J. L. Pickard for the encouragement of extempore speaking to the student in political science who was awarded first rank in competitive extempore debate. A prize of the same value is again offered for this year. The competitive debate will take place early in June.

SAWYER PRIZE.—A special gold medal, or a purse of $25, known as The Sawyer prize, is offered for 1900 for the best essay of three thousand words written by any student of the University on a subject approved by the professor of English.

ROBERT TILLINGHAST FRENCH PRIZE.—A gold medal, in memory of the late Captain Robert French of Davenport, is offered for the best short story written by any student of the University. If work of sufficient merit is offered in competition, the medal will be awarded in 1899. If no such work is offered in that year, the medal will be awarded the first year sufficiently good work appears.

LOWDEN PRIZES.—Frank O. Lowden, Esq., of the class of 1885, offers two prizes of the value of $25 each for excellence in classical scholarship,—one for work in Latin and the other for work in Greek. The conditions of the competition will be announced at the opening of the collegiate year 1899-1900.

MAYER PRIZE.—Mr. Max Mayer of Iowa City has established a prize of the annual value of $25 for excellence in athletics. The details as to the special matters of competition and the methods of awarding the prize will be publicly announced at the beginning of the year 1899-1900. This prize is open to students of all departments of the University.

THE LOCAL ALUMNI ASSOCIATION PRIZE.—An annual prize of free tuition, $25, is offered to the Freshman from Johnson County who passes the best special examination set for this purpose.

MORGAN PRIZE.—A cup of the value of $25 is offered annually by Mr. R. E. Morgan of Iowa City for the best record made in football kicking. The competition is open to all students of the University.

STUDENTS AND CIVIL AUTHORITIES.

The relations of students to all laws and to city ordinances is precisely the same as that of other residents of the city. The University grounds are as completely under the jurisdiction of the civil authorities as any other part of the city.

MEANS OF MORAL AND RELIGIOUS CULTURE.

Besides the opportunities offered by the Christian Associations, and the positive influence exerted by them, the churches of the city, in which the members of the Faculty are a large factor, take a deep interest in the students of the University and heartily welcome them to their public services and to a share in their religious activities and social life. The churches of the city are the Baptist, Christian, Congregational, German and English Lutheran, Methodist Episcopal, Presbyterian, Protestant Episcopal, Roman Catholic, Unitarian, and Church of God.

PHYSICAL TRAINING AND ATHLETICS.

The University authorities encourage physical training as acquired in a gymnasium, in military drill, and in the exercises and sports in the athletic park, but only in such amount and of such character as is compatible with, and promotive of, the higher objects of the University. Intercollegiate contests are allowed, but under conditions as to

membership and organization of teams, and leaves of absence determined by the Faculty, on report and recommendation of the Faculty committee on athletics.

In addition to this committee there is an Advisory Board composed of four students and three members of the Faculty, to which are committed the general supervision and control of athletic affairs. The University is a member of the Iowa Inter-Collegiate Athletic Compact, and the Faculty requires that the rules of the Compact, a copy of which appears on the enclosed leaflet, shall be strictly complied with.

Athletic Park. This field contains about ten acres in the immediate vicinity of the University grounds on which have been constructed a track for running and bicycling, tennis courts, baseball and football fields, and a grand stand.

Gymnasium. In connection with Close Hall is an excellent gymnasium, equipped with suitable apparatus, lockers, baths, etc. This is under the direction of a competent instructor, who organizes classes for both young men and young women.

NEW COLLEGIATE HALL.

This building now in process of erection will be 120 x 260 feet, three stories and basement in height, and will contain ninety-two recitation rooms, seminary rooms and offices, waiting room for gentlemen, ladies' waiting room, and a general lecture room having a seating capacity of 250. Its style is Colonial which harmonizes with the Central Building (Old Capitol). It will be built with Bedford stone, fireproofed throughout, lighted with gas and electricity, and equipped with a complete system of heating and ventilation.

In September, 1900, Collegiate Hall will be occupied by the chairs of English, French, German, Greek, Latin, History, Political Science, Pedagogy, Government and Administration, Psychology and Philosophy, and Mathematics.

In addition to ample lecture rooms, each chair will have an office, and a Seminary room for the use of advanced students working under the direction of the professors in charge, and for the chair of Psychology there will be a large and well equipped laboratory.

EXPENSES.

There are no dormitories and no commons connected with the University. Boarding and lodging in private houses can be obtained for from $3 to $5 a week. Clubs are also formed, in which the cost of living is from $1.50 to $2.50 a week. Room rent varies from 50 cents to $1.50 for each student a week.

The expense for tuition is as follows:

Collegiate Department, $25 per annum, payable, $10 at the beginning of the first term, $10 at the beginning of the second term, and the balance at the beginning of the third term. For one or two terms the fee will be $10 each. Application for reduction of tuition in this department, or for exemption therefrom, may be made to the President, and will be referred to the Executive Committee, or to the Board of Regents.

Each candidate for graduation will be required to pay a fee of $5.

A fee of $10 is required of all candidates for the Master's degree, for the degree of Civil Engineer, or for the degree of Doctor of Philosophy.

Ample facilities are afforded in the city for instruction in bookkeeping, stenography and type-writing, in studies preparatory to the University, and in music, by the High School, the Iowa City Commercial College, the Academy, the Iowa City Conservatory of Music, and by private instructors.

LAW DEPARTMENT.

FACULTY AND LECTURERS.

AMOS NOYES CURRIER, A. M., LL. D.,
Acting President.

EMLIN MCCLAIN, A. M., LL. D.,
Chancellor and Resident Professor of Law.

SAMUEL HAYES, M. S., LL. B.,
Resident Professor of Law.

JAMES A. ROHBACH, A. M., LL. B.,
Secretary and Resident Professor of Law.

HARRY S. RICHARDS, PH. B., LL. B.,
Resident Professor of Law.

GIFFORD S. ROBINSON, LL. D.,
Lecturer on Law.

MARTIN J. WADE, LL. B.,
Lecturer on Law.

HORACE E. DEEMER, LL. B.,
Lecturer on Law.

THEODORE ANDERSON, PH. B., LL. B.,
Librarian.

LAW DEPARTMENT.

PREPARATORY STUDY; LENGTH OF COURSE.

THE profession of law is properly regarded as a learned profession, requiring a considerable degree of general education as a preparation for its proper study and practice. Those who can take a college course either in whole or in part, before entering upon the prescribed period of law study, should do so, and it is recommended that in preparatory study special attention be given to American and English history, political science, and international law. Whether one who desires to enter upon the study of law shall have collegiate preparation may perhaps be left to his own judgment, with the suggestion that such preparation is important to ultimate professional success. But in order that the student may successfully prosecute his studies in the law school he should have at least a high school education or its equivalent, and this will be insisted upon as a condition for admission to this Department.

The Statutes of Iowa regulating admission to the bar require two years' study of law, and the same term of study is required for graduation from the Law Department. The course of study is arranged on this basis, extending through two school years of thirty-six weeks each, exclusive of vacations, and the students are classified accordingly as Juniors and Seniors. The State Bar Association has recommended to the Legislature the extension of the required term of study for admission to the Bar to three years, and whenever such extension is made the Law Department will, without doubt, extend its course of study to three years, and in this respect as in others strive to keep abreast of the best law schools of the country, but so long as a two years' term of study is sufficient to secure admission to the bar it is not deemed expedient to require a longer term for graduation from the Department.

METHODS OF INSTRUCTION.

The aim of any course of instruction in law may properly be considered as twofold: First, to impart a knowledge of the recognized principles of the law, and, secondly, to discipline the mind in methods of legal study. Various methods of instruction, each having its special merits, are pursued in different schools. They may be roughly arranged in three classes, namely, lectures, text-book instruction, and study of cases. The peculiar merit of the first is that it may be made the means of giving the most vivid and striking picture of legal principles; the second furnishes the most convenient means of individual study, and the third the best discipline in legal thinking. In this school the effort is made so to present the subjects as to combine in the highest practicable degree the excellences of these various methods.

In connection with several of the lecture courses, the students are furnished with printed synopses, which give in a concise form, and more accurately than a student would usually write them in his note-book, the principal doctrines of the subject, arranged according to some analytical method. On some of the most extensive and important subjects, the students are required to provide themselves with and use text-books in which lessons are to be regularly prepared and recited, the recitations either following, or being accompanied with, oral explanations more or less formal, calling attention to the important doctrines and explaining those which may be obscure. The study of leading cases is carried on extensively in connection with the courses of lectures, references for that purpose being given by the lecturer, or printed in the synopsis, and the student is frequently required to state briefly in the class the points decided in cases assigned for that purpose. In some subjects the students are required to provide themselves with volumes of selected cases, and the exercise in the class consists of a discussion of such cases by members of the class, and deduction therefrom of the rules of law on the topic to which the cases relate. This exercise in developing the rules of law from actual cases selected for the purpose, and studied by each student before their discussion in the class, familiarizes the student with the methods of investigation pursued by the lawyer and the judge, and gives not only a knowledge of the law on the subject, but a

discipline in research and in legal thinking not to be attained, it is believed, in any other way. As a preparation for this method of study, the course in the study of cases is especially valuable.

The fact that the greater part of the instruction is by resident professors, giving their entire time to the school, makes it possible to pursue each subject consecutively, one hour a day, until it is concluded. In this way the student is able to obtain a clearer and more complete conception of the subject presented than would be possible if the instruction were irregular and disconnected.

As an aid and stimulus in study, and also for the purpose of furnishing satisfactory evidence of progress, written examinations are required from time to time on the various topics of the course, and until a reasonable proficiency in each topic has thus been shown, the candidate for graduation will not be presented to the committee for final examination.

SCHEDULE OF STUDIES.

The course of study is so arranged that the Junior and Senior classes have separate and distinct courses of instruction throughout, and the subjects are divided between the two courses and arranged in each course so as to be presented in natural order.

In the Junior year are placed subjects which are elementary and at the same time fundamental. The work of this year is therefore of more importance to the student than that of the Senior year, and requires careful study, thereby imparting thorough discipline and a familiarity with the methods of legal reasoning. It is believed that the Junior studies are such as to make of the greatest value to the student the services of regular and experienced instructors and the advantages of a law school. Unless the principles of law as a system, the nature of its important divisions, and the fundamental doctrines of such subjects as Elementary Law, Contract, Torts, Criminal Law, Pleading, and Evidence, are thoroughly mastered, the whole legal education will be defective and unsatisfactory.

The courses of study are so arranged that the students in each year shall have instruction in studies peculiar to that year for at least two hours a day, that time being divided between two instructors on sep-

arate subjects, which are thus carried along together. In each class a third hour of class work will be required during a part of the year.

The following schedule of study has several features to some extent peculiar. At the beginning of the Junior year a course of lectures, occupying one hour a day, is given on Elementary Law, in which course the attention of the student is called to the nature of law, its sources and development, the difference between the unwritten and the written law, the method of determining what the law is by use of reports, statutes, treatises, digests, etc., and finally to the different branches into which the whole body of the law is usually divided, and their relations to each other. This course covers remedial as well as substantive law, and thus furnishes instruction in the general principles of pleading, serving in this respect as a basis for the study of Code Pleading.

To the various branches of pleading and practice, special attention is given. Although it has been generally considered that the logic of pleading is to be found in the common law system, while the code system is looked upon as unscientific, yet a comparative study of the two will show that the latter is broader in its principles and more liberal in its application than the former. The principal branches of practice are fully treated during the Junior year in order that the student may apply them in the moot courts; but an advanced course in pleading with special reference to principles of common law pleading is given in the Senior year.

The school attempts to teach how to ascertain the authoritative value of cases. There is one course in which this is the only purpose. In this course the facts, pleadings, and result of each case are briefly stated by the student. Attention is then directed to the manner in which the case reached the court whose opinion is reported. The student is required to discover exactly what proposition of law was essential to the decision and to eliminate *dicta*. To this end he is finally required to prepare a brief but accurate note of the doctrine for which the case is authority. This work is intended to fit students for preparing briefs, text-books, and digests. Obviously this method is identical with that adopted by all careful lawyers in collecting authorities. The student who has mastered the system is prepared to make good use of other case courses in which the ultimate purpose is the

mastery of the subject to which the cases pertain, and, indeed, is prepared to use intelligently all cases to which he may be referred in any part of his study or future practice.

The following schedule presents the course substantially as it was given during the year 1898-99 and the order in which the subjects may be expected during the year 1899-1900.

JUNIOR YEAR.

FALL TERM.

Elementary Law. A course of lectures presenting the elementary principles of law in general, and of its important branches. This course covers also the principles of pleading. Eight and one-half weeks. Professor ROHBACH.

Contracts and Study of Cases. Bishop on Contracts, and Wambaugh's Cases for Analysis, being the text-books used. Thirteen and one-half weeks. Professor RICHARDS.

Code Pleading. A course of instruction, mainly by lecture, on pleading under the codes, with practical exercises. Five weeks. Professor HAYES.

WINTER TERM.

Sales, Bailments, and Pledges. A course of instruction by the use of Burdick's Cases on Sales and printed synopsis of bailments and pledges. Nine weeks. Chancellor MCCLAIN.

Torts. Recitations in Cooley on Torts, with oral explanations, and citation and examination of leading cases. Eleven weeks. Professor HAYES.

Agency. A course of lectures. One week. Judge ROBINSON.

Domestic Relations. A course of lectures on the subject of marriage and divorce, the property rights of married women, parent and child, guardian and ward, the rights and liabilities of infants, and kindred topics. Three weeks. Judge DEEMER.

SPRING TERM.

Negotiable Instruments. Recitations in Norton on Bills and Notes. Five weeks. Professor ROHBACH.

Trial and Judgment. Lectures on procedure at law in Courts of Record from the beginning of the trial until the entering of judgment with references to statutory provisions. Five weeks. Professor HAYES.

Evidence. Recitations in Jones on Evidence. Five weeks. Judge WADE.

Criminal Law. A course of lectures accompanied with recitations in McClain's Outlines of Criminal Law and Procedure, with references also to statutory provisions. Five weeks. Professor ROHBACH.

Probate Law and Procedure. A course of lectures on the execution and probate of wills, and the law of executors and administrators, including the settlement and distribution of decendents' estates, with references to statutory provisions and examination of cases. Five weeks. Professor RICHARDS.

International Law. Lectures, with recitations in Snow's Cases on International Law as a text-book. Optional. Four weeks. Chancellor MCCLAIN.

SENIOR YEAR.

FALL TERM.

Real Property. Recitations in Tiedeman on Real Property, accompanied with oral explanations and references to leading cases and lectures on actions to recover real property. Ten weeks. Professor HAYES.

Insurance. A course of lectures on Fire, Life, and Accident Insurance. Four weeks. Chancellor MCCLAIN.

Carriers. Study of cases, McClain's Cases on Carriers (covering both carriers of goods and carriers of passengers) being used as a text-book. Six weeks. Chancellor MCCLAIN.

Criminal Procedure. Lectures with recitations in McClain's Outlines of Criminal Law and Procedure. Three and one-half weeks. Professor ROHBACH.

Chattel Mortgages. Recitations in Jones on Chattel Mortgages. Three and one-half weeks. Chancellor MCCLAIN.

WINTER TERM.

Equity and Equity Pleading. Recitations in Bispham on Equity. Lectures on Equity Pleading. Nine weeks. Professor RICHARDS.

Corporations. Lectures upon the general doctrines of the Law of Corporations, both private and municipal. Seven weeks. Professor ROHBACH.

Appellate Proceedings. Lectures upon the practice and procedure in Appellate Courts. One week. Judge ROBINSON.

Justice Practice. Lectures on Practice in Justices' Courts. One week. Optional. Professor HAYES.

Guaranty and Suretyship. A course of lectures. One week. Judge DEEMER.

Trial Practice. A course of lectures. Two weeks. Judge DEEMER.

Damages. Recitations in Beale's Cases on Damages. Optional. Four weeks. Chancellor MCCLAIN.

SPRING TERM.

Partnership. Study of Cases, Burdick's Cases on Partnership being used as a text-book. Five weeks. (Two weeks in winter term). Professor RICHARDS.

Constitutional Law and Federal Jurisprudence. Lectures, with references to Cooley's Principles of Constitutional Law, and also study of selected cases. Ten weeks. Chancellor MCCLAIN.

Pleading. An advanced course, Perry on Pleading being used as a text-book. Lectures. Three weeks. Professor HAYES.

Attachment, Garnishment, and Execution. Lectures, with references to statutory provisions and leading cases. Three weeks. Professor HAYES.

STUDIES IN COLLEGIATE DEPARTMENT.

For the purpose of giving the law students all the advantages of the University which it will be practicable for them to make use of, it has been arranged that so many of them as can do so without interference with the regular studies required of them in the Law Department, may attend any classes in the Collegiate Department.

Special attention is called to the opportunity thus afforded for the

study of elocution (in which separate classes are organized for law students) and for pursuing any of the courses of study laid down in political science, in history, in logic, or in English. No extra charge will be made for such studies, but law students will be admitted to such classes only on the approval of the Law Faculty, and with the consent of the professor whose class they desire to enter.

LAW ELECTIVES FOR COLLEGIATE STUDENTS.

The Collegiate Faculty permits Seniors in that Department to take as elective studies in their collegiate course, and to receive credit therefor, any of the Junior law studies to the extent of thirty-six weeks' work of one hour a day, but this provision does not apply to students entering the Senior year from other colleges.

It is believed that, whether looked upon as a means of mental discipline or as a preparation for the duties of citizenship or the prosecution of business, a full course in the Law Department will be found, for those who are properly prepared for it and can pursue it as a part of a liberal education, fully equal to any course of study that can be pursued for the same length of time. If, however, a student deems it not practicable for him to pursue such a course of study after graduation from the Collegiate Department, he may derive some of the advantages of such study, and some insight into the principles and methods of the system of law under which he lives, by electing as part of his regular course some of the groups of studies above given.

Credit will be given to students in the Collegiate Department taking studies in this Department for work done, but no credit can be given to those students in respect to time, the statute requiring, for admission to the bar of the State, that the applicant shall have spent at least two years of nine months each in a law school, or two years of twelve months each, in the office of some practicing attorney. Therefore, while this Department gives credit for work done in any study taken with its classes, yet it will not give credit for time unless the student taking such study or studies shall have been duly enrolled as a student of this Department.

MOOT COURTS.

For the purpose of affording exercise in the application of legal principles to statements of facts, and in connection with instruction in

pleading and practice, moot courts have become a well recognized and important feature of the law school. Two such courts are conducted in connection with the Department, holding their sessions on one or more afternoons of each week, each presided over by a member of the Faculty. It is deemed best to keep the members of the two classes separate in this, as in other work of the school, and it is thus possible to select the cases assigned so that they may relate to subjects on which the students have already had instruction. The Senior moot court will be organized at the beginning of the fall term, whilst that of the Juniors will not commence its work until the winter term, practical exercises in pleading being given the members of that class during the fall term, in connection with instruction in pleading and practice.

The method of conducting these courts is to give to two or more students, representing the attorneys in the case, a written statement showing the facts on which the action and defense are to be based. Pleadings are then prepared as they would be in an actual case. These pleadings are subjected to attack by motion or demurrer, and the issues of law or fact raised are tried to the court, the statement of facts being regarded as the evidence offered on issues of fact.

Another method of trial has been introduced with success, which involves the proof by competent evidence of the facts shown by the statement. This gives practice in the examination of witnesses and in applying the rules determining the admissibility of evidence. During one term, trials are conducted with all the formalities usual in *nisi prius* courts, jurors being summoned and impaneled, witnesses subpœnaed, and instructions prepared and given.

It is also recommended that the students form club courts for further exercise in pleading and practice. Professors will give such assistance in forming and conducting club courts as is needed.

LITERARY SOCIETIES.

Two literary societies, the Hammond Law Senate and The Forum, composed exclusively of students of this Department, hold regular weekly meetings, furnishing to their members valuable training in debating and other exercises usually provided for by such organizations.

LIBRARY FACILITIES.

In commodious quarters on the same floor with the lecture-room is the Law library of nine thousand five hundred volumes, to which the students have personal access. This library contains a full series of the reports of the Supreme Court of the United States and of the courts of last resort of thirty-three states, including all the series of reports most frequently referred to; also the American Decisions, American Reports, American State Reports, Lawyers' Reports Annotated, a collection of English Reports, which, with additions lately made, is almost complete, full series of the Reporter System and a large collection of the latest and best law text-books.

The library is in charge of a regular librarian who renders valuable assistance to the students in the prosecution of their work.

The library rooms are open for the use of students from 8 A. M. to 12 M., and from 1:30 to 5:30 and 7 to 9 P. M. of each school day, and during the forenoon of Saturday.

The University library is open to the students of this Department, as well as those of the other Departments of the University, and books may be drawn from it under reasonable regulations. No extra charge is made for the privileges of either of the libraries.

HAMMOND HISTORICAL LAW COLLECTION.

A valuable collection of twelve hundred volumes relating principally to the Civil Law and the History of the Common Law, presented to the University by the widow of William G. Hammond, LL. D., the first Chancellor of the Law Department, is kept in the Law library as a separate collection for the use of the students of the Department and others interested in such subjects. These books are in special cases, under the charge of the Law librarian and accessible on request.

LECTURE HALL.

The Law Department has the exclusive occupancy of the second floor of the central, or stone, building on the campus, which was erected for and used as the Capitol Building before the removal of the capital of the State to Des Moines. The rooms on this floor are those formerly occupied as legislative chambers. The lecture hall is fur-

nished with arm-chairs provided with broad arm-rests for use in taking notes.

FEES AND EXPENSES.

The rate of tuition established by the Board of Regents is $20 per term of about twelve weeks, payable in advance, to the Secretary of the University. Each student upon passing his final examination, is required to pay the sum of $7 as a graduation fee, to cover the charge for diploma and for certificates of admission to the State and Federal Courts. There are no other fees or charges.

Other expenses may be made very reasonable. Good board and lodging can be had at from $3.50 to $4.50 per week, and this may be reduced to $2.50 or $3.00 per week by taking meals in clubs.

COST OF BOOKS.

The books required for use in recitations, and with which the student must provide himself, are the following:

Bishop on Contracts; McClain's Synopses; Annotated Code of Iowa; Wambaugh's Cases for Analysis; Burdick's Cases on Sales; Cooley on Torts; Jones on Evidence; McClain's Outlines of Criminal Law and Procedure; Norton on Bills and Notes; Tiedeman on Real Property; McClain's Cases on Carriers; Bispham's Principles of Equity; Cooley's Principles of Constitutional Law; Perry on Pleading; Burdick's Cases on Partnership, and the Law Bulletin.

The cost of the required books will not exceed $45.00 for the Junior year, or $70.00 for both years.

The student will find it greatly to his advantage to provide himself with a good law dictionary, and if practicable, a copy of Blackstone's Commentaries in any edition. It is desirable, also, that the student bring with him or purchase, in addition to the above list of required books, as many as practicable of the following which are recommended as the leading and best books on the subjects which are taught by lectures; Walker's American Law, or Pomeroy's Municipal Law; Schouler's Domestic Relations; Pomeroy's Remedies and Remedial Rights, or Bliss on Code Pleading; Drake on Attachment; Benjamin, or Tiedeman, on Sales; Schouler on Bailments and Carriers; Story, or Mechem, on Agency; Bates on Partnership; May on Insurance; Beach,

or Morawetz, on Corporations; Curtis on Jurisdiction of Federal Courts; Cooley's Constitutional Limitations.

Any of the books mentioned may be procured through the Law librarian from time to time, as needed, at a considerable reduction from list price; they are not kept for sale by the book-stores in Iowa City.

The Department owns about twelve sets of the text-books above mentioned as required in the course, which it will rent in sets to students, furnishing them all the books required for either year for $12.50 for the year. The rent sets do not include a law dictionary, nor the Law Bulletin. As there are sometimes more calls for rent sets than can be met, those who desire to rent books should make application in advance.

ENROLLMENT AND PRELIMINARY EXAMINATIONS.

Students may enroll at any time. It is better, however, to enter at the beginning of the term, and best to enter at the commencement of the school year.

Those who enter the Department are expected to have an English education at least equivalent to that generally given in the high schools of the State. A diploma, or certificate, showing the completion of a college or high school course, or a course of study in an academy, equivalent to a high school course, will be accepted in lieu of an examination. Students who have not such diploma or certificate, must take a preliminary examination in the usual branches of a high school course, or present such evidence of proficiency therein as the Faculty may require.

At the preliminary examination of September, 1898, each candidate was required to write a short essay, correct in expression, spelling, capitalization, punctuation and paragraphing, on any one of the following subjects, the essay not containing less than three hundred nor more than six hundred words. The subjects were:

Daniel Webster and contemporaneous history; The Monroe Doctrine; Causes leading to the War with England in 1812; The Missouri Compromise; Kansas, the struggle as to whether it should be free or slave; Penn and the Settlement of Pennsylvania; The Settlement of Jamestown.

Future examinations will be similar to the examination here described, the subjects for essays varying from year to year.

Students wishing to study special subjects without graduation will be admitted without preliminary examinations upon showing themselves qualified to pursue the studies desired.

Preliminary examinations will be held on Wednesday, September 13, 1899, commencing at 9 A. M.

ADMISSION TO SENIOR STANDING.

To be qualified for admission to the Senior class a student must have studied law in this or some other law school for at least thirty-six weeks, so that on the completion of the Senior year in this school he will have had the two years of law study required by the statute for admission to practice in the Supreme Court of Iowa. In exceptional cases the Faculty will accept a certificate of reading under the direction of an attorney for not less than four months in lieu of law school work; but a substitution of this kind will be discouraged, and will not be accepted for more than one of the three terms of school work required for the Junior year. Credit for time of practice as a licensed attorney in this or any other state will be given under the same limitations. If any claim for credit on account of reading under an attorney's direction or for time of practice as a licensed attorney is to be made, certificates of the necessary facts must be presented when the student asks enrollment as a Senior, that is at the beginning of the fall term.

In addition to the requirements as to time, it will be necessary that the applicant shall pass an examination, before admission to the Senior class, upon at least five of the principal subjects of the Junior year, and if he is a candidate for graduation it will be necessary, in addition to the five subjects before mentioned, that he shall pass upon all the subjects of the Junior year as well as those of the Senior year, at some time previous to his graduation. This rule applies to those who have been admitted to practice as well as to students of law.

The examinations for admission to the Senior class for those who have not previously completed the Junior course in the Department will commence on the first day of the University year, Wednesday, September 13, 1899.

It will be seen from the above statement that the Faculty requires for graduation substantially two years of law school study, giving credit in no case for office reading or time of practice beyond three months of law school work. In so far as these requirements are more strict as to credit to be given for office reading than heretofore, they will not be applicable to those desiring to enter the Junior class at the beginning of the next school year, to-wit, in September, 1899; but beginning with the Junior class enrolled in the fall of 1900 they will be strictly followed. Those who desire to be enrolled as Seniors in September, 1900, for graduation in June, 1901, may do so under the provisions announced in previous catalogues by which a substitution of office study to the extent of eight months in lieu of two of the three terms of the Junior year, was permitted.

The Faculty feels that two years of law school work is the very least that should be accepted as sufficient to entitle a student to graduation and therefore it will not permit the work of the Junior and the Senior years to be combined or carried on at one time except that students who are properly admitted to Senior standing will be allowed to make up any portion of the Junior course in which they are deficient. It must be borne in mind that it is not the number of pages read, nor the number of answers learned, which determines the student's attainments in law, but that discipline and development of the mind, and the habit of correct legal thinking, are essential elements of a legal education. Experience has shown how imperfect, as a rule, is the preparation of those who study in offices, and how necessary systematic instruction is at the beginning of the student's course, and the Faculty strongly recommends that all the studies of the Junior year be pursued in the law school and that if but one year can be spent in school, the student shall commence his studies there and read in an office afterwards. Even those who have had previous reading in an office will, it is believed, usually find the instruction in the Junior year to be of greater importance to them than that of the Senior year in obtaining a thorough and accurate knowledge of the law. The practical advantages of experience in a law office are not to be underrated, but such experience will prove of greater benefit after the principles of law have been acquired than at the beginning of the study.

GRADUATION.

Two years' study is essential to graduation, one year of which must have been spent in this school.

Students will be given credit for time of study in another school to the extent of one year. In exceptional cases office study or time of practice as an attorney may be accepted as a substitute for three months of law school work.

Before being recommended for graduation, the candidate who has pursued a portion of his studies elsewhere, must satisfy the Faculty of his proficiency in those studies by passing examinations therein.

Candidates for graduation must be of good character and must, upon being recommended by the Faculty, pass a final examination conducted at Iowa City by a committee of examiners appointed by the Supreme Court of Iowa, in accordance with the rules of that court regulating admission to the bar. Upon passing such examination, the candidates receive the degree of Bachelor of Laws, and are admitted to practice in all courts of the State of Iowa, and in the federal courts of the Northern District of Iowa, oaths of admission being administered in connection with their graduation; and they receive the usual diplomas, and certificates of admission. Those who are not twenty-one years of age may pass the examination and receive their diplomas, but cannot be admitted to practice until attaining that age.

Final examinations will be held only at the end of the University year.

THESES.

Each candidate for graduation must present to the Faculty, on or before the first Monday in April, a thesis upon some legal topic approved by the Faculty. Such thesis must be legibly written, or printed by typewriter, on paper 8 x 10½ inches in size of page, leaving a blank margin of at least one inch at sides and at top and bottom. The thesis shall not be less than 1,500 nor more than 2,500 words in length, exclusive of citations of authorities. In citing cases the names of the parties, as well as the volume and page of the report, must be given. The character of the thesis will be taken into account in determining whether the candidate is qualified to be recommended to the Examining Committee for final examination.

All theses become the property of the Department.

The subjects approved by the Faculty for the year 1898-99 are as follows:

1. Discuss the validity of a stipulation in a free pass exempting the carrier of passengers from liability.

2. Can damages be recovered for the malicious prosecution of a civil action without cause?

3. Discuss the effect of a stipulation in a fire policy for arbitration or appraisement as a condition to recovery.

4. Discuss suicide as a defense to recovery under a life policy.

5. Explain the distinction between conditions and warranties in sales.

6. In a deed conveying the fee to a tract of Iowa land, the only covenant expressed is one against incumbrance. The grantor was at the time of conveyance a married man and his wife in no way relinquished dower. Discuss the grantee's right to sue on the breach of this covenant while grantor and his wife are still alive, and his right to assert a claim against the grantor's estate after the widow has claimed and been allowed her dower out of the land.

7. Discuss the validity of a stipulation in a lease purporting to authorize the lessor to take possession without writ or order of the court therefor against the consent of the lessee in the event the latter retains possession after the expiration of the term; and also the right to recover in damages when the defendant has done that which gave a cause for the action for forcible entry or detention.

8. Discuss the legal relations existing between water companies and consumers. Is water property?

9. Discuss the liability for attempts to commit acts which are impossible, and which are not known to be so, by the one attempting to carry out his criminal intentions.

10. Discuss the growth of federal encroachment upon state authority as indicated by the decisions of the federal courts.

11. Discuss the theory of the burden of proof where insanity is set up as a defense in a criminal prosecution.

12. Discuss the question of whether or not the same promise or performance may serve as a consideration for successive promises.

13. Is a party's capacity to contract determined by the law of his domicile or by the law of the place where the contract is made?

14. Does a part performance of a contract, which as a whole cannot be performed within a year, take the case out of the Statute of Frauds?

15. Discuss the effect of *Rylands v. Fletcher*, L. R. 3 H. L. 330, as shown by subsequent decisions.

Any further information may be obtained by addressing the President of the University, or Emlin McClain, Chancellor of the Law Department, at Iowa City, Iowa.

MEDICAL DEPARTMENT.

FACULTY AND OTHER INSTRUCTORS.

AMOS NOYES CURRIER, A. M., LL. D.,
Acting President.

PHILO JUDSON FARNSWORTH, A. M., M. D.,
Emeritus Professor of Materia Medica, and Therapeutics.

JOHN CLINTON SHRADER, A. M., M. D., LL. D.,
Emeritus Professor of Obstetrics, Gynecology, Clinical Gynecology, and Diseases of Children.

WILLIAM DRUMMOND MIDDLETON, A. M., M. D.,
Professor of Surgery and Clinical Surgery, and Dean of the Faculty.

LAWRENCE WILLIAM LITTIG, A. M., M. D., M. R. C. S.,
Professor of Theory and Practice of Medicine, and Clinical Medicine, and Assistant to the Chair of Surgery.

JAMES RENWICK GUTHRIE, A. M., M. D.,
Professor of Obstetrics and Gynecology.

ELBERT WILLIAM ROCKWOOD, B. S., M. D.,
Professor of Chemistry and Toxicology, Director of Hospital, and Secretary of the Faculty.

JAMES WILLIAM DALBEY, B. S., M. D.,
Professor of Ophthalmology.

CHARLES SUMNER CHASE, A. M., M. D.,
Professor of Materia Medica, and Therapeutics.

WALTER L. BIERRING, M. D.,
Professor of Pathology and Bacteriology, and Clinical Assistant to the Chair of Obstetrics and Gynecology.

JOHN WALTER HARRIMAN, M. D.,
Professor of Anatomy, and Assistant to the Surgical Clinic.

CHARLES MOORE ROBERTSON, A. M., M. D.,
Professor of Otology, Rhinology, and Laryngology.

WILLIAM ROBERT WHITEIS, M. S., M. D.,
Professor of Histology and Embryology, and Clinical Assistant to the Chair of Otology, Rhinology, and Laryngology.

LEE WALLACE DEAN, M. S., M. D.,
Acting Professor of Physiology, Assistant to the Chair of Ophthalmology, and Lecturer on Hygiene.

MARTIN J. WADE, LL. B.,
Professor of Medical Jurisprudence.

GERSHOM HYDE HILL, A. B., M. D.,
Lecturer on Insanity.

FRANK THOMAS BREENE, D. D. S., M. D.,
Lecturer on Dentistry.

EMIL LOUIS BOERNER, PHARM. D.,
Instructor in Pharmacy.

WILLIAM EDWARD BARLOW, M. A.,
Demonstrator of Chemistry.

WILBER JOHN TEETERS, M. S., PH. C.,
Demonstrator of Chemistry.

JOHN T. MCCLINTOCK, A. B., M. D.,
Demonstrator of Anatomy, Pathology, and Bacteriology.

WILLIAM GREEN,
Janitor.

MEDICAL DEPARTMENT.

A thorough elementary preparation is required before entering on the course of medical lectures. The University affords a preliminary scientific course preparatory to the professional, and it is expected that many will avail themselves of this opportunity. In the branches of medicine there should be a thorough training in principles before the practical portion is begun. For this purpose a careful presentation of the subjects is made by lectures, and the knowledge fixed by recitations and frequent reviews. Ample means of illustration are used, and the materials for demonstration are abundant. In the practical branches abundant clinical material is found to illustrate the subjects taught.

The thirtieth annual course of lectures will begin on September 13, 1899, and will close on March 28, 1900. There will be a holiday vacation commencing Thursday evening, December 21, and ending Wednesday morning, January 3, 1900.

The course is divided into four years of twenty-six weeks each. It is the intention of the Board of Regents and the Faculty to increase the length of the annual course of lectures as soon as possible, and notice of such increase may appear in the next annual announcement.

Medical, surgical, gynecological, ophthalmological, aural, laryngological, and rhinological clinics, are held each week during the term. Attendance upon these is required of all students, excepting those engaged in laboratory work during clinic hours.

OUTLINE OF THE PLAN OF INSTRUCTION.

ANATOMY.

The lectures in anatomy will be illustrated by means of specimens, charts, models, dissections, and black-board figures. Special effort will be made to associate anatomical arrangement with clinical facts and methods of diagnosis.

During the first year the lectures will cover the subjects of osteology, syndesmology, the alimentary canal and associated structures, the vascular and respiratory systems, and the genito-urinary organs. These will be presented in full detail from their anatomical, mechanical, and functional aspects, attention being paid to practical developmental laws and relations of viscera to surface markings and neighboring structures.

In the second year the subjects covered during the first year will be carefully reviewed with additional reference to the medical and surgical anatomy. The nervous system and the anatomy of the special senses will be presented in detail not only by lectures but also by practical demonstrations to the class divided into small sections.

The third year will be devoted entirely to regional anatomy. The lectures during this year will at all times be illustrated by special dissections or surface marking upon the living subject.

PRACTICAL ANATOMY.

The thorough study of this branch, for at least four courses, is made a condition of graduation. Facilities for obtaining material are such, under improved legislation in the State, that an abundance will be provided for all who may apply. The demonstrators will always be ready to aid and direct the prosecution of these studies.

Upon the completion of each course of dissection, the student will be examined on the anatomy of the part dissected, and if the examination be satisfactory, a certificate to that effect will be given. No fee is required for dissecting material.

PHYSIOLOGY.

In this subject the inductive method will be very largely employed in imparting instruction. The lectures will be illustrated by diagrams, by charts, and by experiments upon the lower animals. The relations between physiology and medical diagnosis will be presented to the student. During the first year the lectures will cover the subjects of general physiology, proximate principles, digestion, absorption, circulation, respiration, excretion, and the general physiology of the nervous system. The lectures upon the subjects will be thorough. At

the close of the session there will be an examination which must be passed before the student can take up the second year's work in physiology. During the second year a careful review of the subjects treated the first year will be made. The physiology of the nervous system, the generative system, and the special senses will be studied. At the completion of the second year's work there will be a final examination in this branch.

CHEMISTRY AND TOXICOLOGY.

The course in chemistry extends through two years. In the first year the lectures are on general chemistry. The laboratory work consists, first, of analytical chemistry, including methods of testing for the metallic poisons; then the common medicinal substances are studied. The student learns methods of chemical manipulation, and the use of apparatus, and also becomes acquainted with the action of reagents and of chemicals upon each other. The course includes the examination of drinking water from a sanitary standpoint, each student making a number of analyses of various wholesome and polluted waters. It concludes with the methods of quantitative analysis, which are of the most use to the medical practitioner.

In the second year physiological chemistry is taken up. The lectures are in explanation and amplification of the laboratory work. The latter includes the study of the proximate principles of the body and their chemical changes. Artificial digestive experiments are made, their products being isolated and tested. The constituents of the blood are tested, and the methods for the identification of stains are learned. The qualitative tests for the abnormal constituents of the urine follow, and the quantitative determination of such as are of importance. The course is completed by the identification of urinary sediments and calculi, and the analysis of various pathological specimens of urine.

The lectures on toxicology treat of the physiological and chemical action of the principal poisons, as well as their antidotes. The methods of identifying these in food, excreta, etc., are explained and illustrated by experiments.

The work in practical chemistry is conducted in the Chemical Building of the University, in which the Medical Department occupies

rooms on the ground floor. These consist of rooms for the instructors, store rooms, and two large laboratories. They are well lighted and heated by steam. Hoods, connected with ventilating shafts, remove offensive and injurious gases. The outfit is ample for demonstrating the general principles of chemistry, as well as its application to medicine. Each student is supplied with a set of the necessary apparatus.

HISTOLOGY.

The course in histology extends through the Freshman year and consists of a series of two didactic lectures and four hours laboratory work each week.

The histological laboratory, situated on the first floor, southeast corner of the Medical Building, is well lighted and thoroughly equipped with microscopes and all necessary apparatus for carrying on the work. The laboratory work comprises the preparation and study of microscopic slides showing the minute structure of the different tissues and organs of the body. The slides prepared by each student become his personal property.

Instruction is given in histological technique, hardening, embedding, section-cutting, staining and preparation of material for examination.

During the Sophomore year opportunities are offered to those who wish to work in embryology and special histology.

PHARMACY.

An outline course in pharmacy is specially provided whereby the student may familiarize himself with pharmaceutical processes and the methods of preparing official preparations by actual laboratory practice.

MATERIA MEDICA.

This subject is presented during the Freshman and Sophomore years in progressive form. The introductory topics, such as definitions, dosage, modes and routes of administration of medicines, prescription writing, with special reference to the detection and avoidance of incompatibilities, will be presented at the beginning of each session

before the classes jointly. The further consideration of the subject will be progressive, organic drugs being presented one session, inorganic the next. At the close of each session a test will be given on the topics covered during the session. Toward the close of the Sophomore year the entire subject will be reviewed and a final examination given. During the didactic lectures crude drugs will be presented from time to time illustrative of the subject. All official preparations from the same will be presented and briefly discussed during the course.

THERAPEUTICS.

This branch of pharmacology, recognized as the distinctively scientific division of the subject, will be presented during the Sophomore and Junior years. Both general and special therapeutics will be outlined and discussed with special view to stimulate in the student a desire to prosecute methods of original research in the direction of studying the physiological action of drugs. To this end experiments will be made from time to time illustrative of such action upon the lower animals.

PATHOLOGY AND BACTERIOLOGY.

The course in pathology and bacteriology extends through the Sophomore, Junior, and Senior years, and is presented by means of didactic lectures and laboratory work. The lectures are devoted to bacteriology and general and special pathology, and are illustrated by means of drawings, preparations from the medical museum, and specimens derived from post-mortem examinations.

The pathological and bacteriological laboratory is situated in the west hall on the second floor of the Medical Building. It is thoroughly equipped with new microscopes of the most modern type, and all apparatus necessary for carrying on every form of bacteriological research. Each student is provided with a table, a microscope, and the necessary staining reagents.

In the Sophomore year the lectures are confined to general pathology and the elementary principles of bacteriology. The laboratory work consists of two hours each week throughout the year, and is illustrative of the didactic lectures, comprising the preparation and

study of slides showing the general pathological changes that occur in human tissues. An examination will be held at the close of the year.

In the Junior year the lectures are devoted to the pathology of tumors, and the special pathology of the different organs of the human body. The laboratory work consists of two hours a week throughout the year. It bears a direct relation to the lectures and comprises the preparation and study of slides showing the disease changes that occur in special tissues and organs, including a complete collection of tumors. Furthermore the work embodies the study of the general characteristics of micro-organisms, the preparation of artificial media, and the mounting of slides of the different organisms, with special reference to the pathogenic bacteria that are of great interest to medical men. Instruction is also given in the technique of making a post-mortem examination.

A final examination in pathology will be held at the close of the Junior year. During the Senior year two hours each week are devoted to clinical microscopy, and advanced work in pathological histology and bacteriology.

Beginning the Thursday after Commencement, at 1:30 P. M., there is given a private course in practical bacteriology, which continues for one month. The laboratory is open daily from 9 A. M. to 6 P. M., and the students become familiar with all the details of bacteriological technique. The number of participants is limited to twenty. To secure a place at a table, $5 must be paid March 1. The rest of the fee is payable at the opening of the course.

PRACTICE OF MEDICINE.

The Chair of Theory and Practice of Medicine combines didactic and clinical instruction. Many of the subjects treated in the didactic course find illustration in the hospital amphitheatre, and pathological study is facilitated by post-mortem examinations, as well as by wet and dry preparations from the museum.

MEDICAL DIAGNOSIS.

Recitations for the Senior class will be held each week on this subject, the department of medical diagnosis receiving practical treatment

here as well as at the clinic. The Sophomore class will receive practical instruction in physical diagnosis, including the use and application of all the instruments and methods of precision.

SURGERY.

Surgery is taught didactically in lectures which are reviewed by daily class quiz, with recitation by advanced students on prior work; and practically by actual surgical diagnosis and treatment of patients at the clinic by the members of the Senior class; also by a course of operative surgery for the Senior class in which all surgical operations are performed upon the cadaver. One hour each week is devoted to minor surgery and bandaging.

OBSTETRICS AND GYNECOLOGY.

The instruction in these important subjects is complete. All modern means for illustration are employed, and advanced students are carefully trained in the principal obstetric operations.

OPHTHALMOLOGY.

The instruction in this branch combines didactic and clinical teaching. One lecture a week is given in the anatomy, physiology, and pathology of the region involved, and the Wednesday clinic is devoted to the diagnosis and treatment of its diseases. A large number of cases appear at these clinics, and a great many operations of all kinds are performed.

OTOLOGY, RHINOLOGY, AND LARYNGOLOGY.

The instruction in these branches is given by didactic and clinical teaching, one lecture and one clinic being given each week. Much attention is directed to the methods of examination and treatment of cases. The ear, nose, and throat clinic being large, it enables students to become familiar with the use of instruments, while all are allowed to treat patients under the supervision of the instructor. It is the aim of the course to familiarize each student with the normal as well as the pathological conditions of the several organs. The clinic room has been especially fitted up for the work and is in itself complete.

MEDICAL JURISPRUDENCE.

In this important department of medicine, the students receive instruction in those subjects that are essential to the practitioner.

INSANITY.

This subject is discussed as concisely as possible, with the special needs of the general practitioner constantly in view, and the material that appears at the clinic from time to time, during the term, is utilized in illustration. A course of lectures on this subject will be delivered during the latter part of January.

HYGIENE.

The course in hygiene will consist of twenty-four lectures and recitations. The lectures will cover the subject of disinfection, school hygiene, public hygiene, and heredity. A written examination will be held at the end of the year.

CLINICS.

The clinics have been well and abundantly supplied with material. The patronage of the hospital is such that a variety of cases is presented for operation and treatment. The hospital is open for the reception of patients during the entire year.

Every case is fully utilized as a means of instruction by a system of examination in which advanced students are required to diagnosticate disease and suggest treatment, before the class, subject to the correction of the clinical teacher.

CLINICAL PATIENTS.

Medical cases should be referred to Professor L. W. Littig; surgical cases to Professor W. D. Middleton; gynecological cases to Professor J. R. Guthrie; eye cases to Professor J. W. Dalbey; ear, nose, and throat cases to Professor C. M. Robertson.

MEDICAL MUSEUM.

The museum contains a large and interesting collection of morbid and other specimens, furnishing valuable aid to instruction by the

large amount of material illustrative of pathological and normal conditions. This is constantly drawn upon as a means of demonstration.

Physicians are earnestly requested to send to the curator, Dr. W. L. Bierring, any specimens of healthy, morbid, or comparative anatomy. For all such favors due credit will be given by labeling the specimens with the name of the donor before placing them in the museum.

MEDICAL LIBRARY.

The Ranney Memorial Medical Library, consisting of a large number of works especially devoted to insanity and mental diseases, is open for consultation, together with a well selected list of books on general medical subjects to which are added each year the latest works and the latest editions. The reading room, which is situated on the third floor of the Medical Building, is supplied with the current medical journals, and will be open every day of the session. Medical students have also the privilege of drawing books from the general library of the University.

OUTLINE OF THE COURSE.

FRESHMAN YEAR.

LECTURES AND RECITATIONS, EACH WEEK.

Anatomy—Four lectures; one recitation.

Physiology—Three lectures; one recitation.

General Chemistry—Three lectures; one recitation.

Materia Medica—Organic: two lectures; one recitation.

Histology—Two lectures; one recitation.

Laboratory work for the session as follows:

Chemistry—One hundred and sixty hours.

Biology and Histology—One hundred hours.

Bandaging—Twenty hours.

Dissecting—Two courses.

Final examination in General Chemistry and Histology, also examination (not final) in Physiology, Anatomy, and Materia Medica.

SOPHOMORE YEAR.

LECTURES AND RECITATIONS, EACH WEEK.

Anatomy—Four lectures; one recitation before holidays, two after holidays.

Physiology—Three lectures; one recitation before holidays, two after holidays.

Physiological Chemistry—Two lectures.

General Pathology and Bacteriology—Two lectures; one recitation.

Materia Medica—Organic: two lectures until holidays; one recitation. Inorganic: one lecture until holidays.

Therapeutics—One lecture after holidays.

Obstetrics—Two lectures.

Medical Diagnosis—One hour.

Hygiene—One hour.

Pharmacy—Ten lectures during the session.

Laboratory work for the term as follows:

Physiological Chemistry—Sixty hours.

General Pathology—Fifty hours.

Dissecting—Two courses.

Pharmacy—Thirty hours.

Embryology—Optional.

General University Clinics, when not otherwise engaged.

Final examination in Anatomy, Physiological Chemistry, Physiology, Materia Medica, General Pathology, and Hygiene.

JUNIOR YEAR.

LECTURES, RECITATIONS, AND CLINICS, EACH WEEK.

Theory and Practice of Medicine—Four lectures; one recitation.

Surgery—Three lectures; one recitation.

Pathology—Two lectures; one recitation:

Therapeutics—Two lectures; one recitation.

Obstetrics—Two lectures; one recitation.

Gynecology—One lecture; one recitation.

Toxicology—One lecture.

Applied Anatomy: Medical, Surgical, and Nervous—One lecture.

Applied Physiology of the Nervous System—Twelve lectures during the session.

General Medical, Surgical, Gynecological, and Ophthalmological Clinics—Seven hours.

Laboratory work for the term as follows:

Pathology—Fifty-two hours.

Bacteriology—Twenty-six hours.

Final examinations in Obstetrics, Therapeutics, and Special Pathology.

SENIOR YEAR.

LECTURES, RECITATIONS, AND CLINICS, EACH WEEK.

Theory and Practice of Medicine—Five lectures; one recitation.

Surgery—Three lectures; one recitation.

Gynecology—One lecture; one recitation.

Ophthalmology—One lecture.

Otology, Rhinology, and Laryngology—One lecture.

Dermatology—One lecture after holidays.

Pædiatrics—One lecture after holidays.

Operative Surgery—Twelve hours during the session.

Operative Obstetrics—Twelve hours during the session.

Medical Jurisprudence—Twelve lectures during the session.

Dentistry—Five lectures during the session.

Hæmatology—Five hours during the session.

Insanity—Twelve lectures during the session.

General Medical, Surgical, Gynecological, Ophthalmological, Aural, Rhinological, and Laryngological Clinics—Nine hours.

Laboratory work:

Clinical and Medico-legal Microscopy—Twenty-six hours.

Final examination in Practice of Medicine, Surgery, Gynecology, Ophthalmology, Ear, Nose, and Throat.

TEXT-BOOKS AND BOOKS OF REFERENCE.

The following are recommended by the Faculty:

Medical Dictionary—Gould, Duane, Dunglison.

Anatomy—Gray, Quain, Morris, Treve's Surgical Applied Anatomy.

Dissectors—Holden, Heath, Ellis.

Comparative Anatomy—Wiedersheim, Jeffery Bell, Howell.

Physiology—Landois and Stirling, Stewart, Kirk, Foster, American Text-book.

General Chemistry—Simon, Bartley, Roscoe, and Schorlemmer.

Physiological Chemistry—Rockwood, Vaughan and Novy.

Urine Analysis—Purdy, Neubauer and Vogel, Black.

Toxicology—Wormley, Taylor.

Surgery—Park, American Text-Book of Surgery, Roberts, Stimson on Fractures and Dislocations, Wharton's Minor Surgery and Bandaging, Warren, Senn on Tumors, DaCosta.

Pathology—Stenzel, Ziegler, Thoma, Delafield and Prudden, Green.

Bacteriology—Abbot, McFarland, Crookshank, Sternberg.

Practice of Medicine—Osler or Tyson, Anders, Strümpel, Wood and Fitz, American Text-Book of Theory and Practice of Medicine, Flint.

Medical Diagnosis—Vierordt, Musser, DaCosta, Flint.

Obstetrics—American Text-Book of Obstetrics, Lusk, Davis, Parvin, Leishman, Playfair, King, Dorland.

Obstetric Surgery—Grandin and Jarmin.

Embryology—Minot, Manton.

Gynecology—Skene, Thomas and Munde, Garrigues, American Text-Book, Pozzi, Davenport, May's Manual, Clinical Gynecology, Keating and Coe.

Materia Medica—White and Wilcox, Potter, Bartholow.

Therapeutics—Hare, H. C. Wood, Potter, Farquharson.

Diseases of Children—Starr's American Text-Book, Holt, J. L. Smith, Goodhart.

Medical Jurisprudence—McClellan's Civil Malpractice, Wharton and Stille, Beck, Elwell.

Histology—Stoehr, Piersol, Schafer, Stirling.

Ophthalmology—Fuchs, Juler, Noyes, Nettleship on the Eye.

Otology, Laryngology, and Rhinology—Burnette, MacBride, Bosworth, Roosa, Buck, Politzer, Sajous, Browne.

Insanity—Lewis's Text-Book of Mental Diseases, Stearn, Clouston's Mental Disease.

Dermatology—Jamison, Hyde, Duhring, Crocker.

Practical Hygiene—Parker.

Dietetics—Thompson, Pavy.

Text-books and books of reference can be obtained at an average cost per volume of from $2.00 to $5.00, or $15.00 to $20.00 per year.

It is of far greater advantage to the student, during the college course, to study and review a single text-book in each department than to read several cursorily. It is, therefore, advised that a single work, in each department recommended above, be chosen and carefully studied, while any other may be used for reference and subsequent perusal. The first one of each of the above lists is preferred.

TUITION.

The fee for tuition is $65.00 for each year, of which $40.00 is payable at the opening of the term, and the balance on or before January 10. All fees must be paid, when due, to the Secretary of the Board of Regents, William J. Haddock, and students who do not pay these when due will be suspended from the Department until payment has been made.

In the combined course the fees are $25.00 for each of the first two years in the Collegiate Department, and $75.00 for each of the last four years of the course, paid as medical fees. Students entering the Medical Department from other schools with advanced standing will pay $10.00 for dissecting material used in making up deficiencies in this branch. For students taking a partial course the fees are $10.00 per year for each branch except dissecting where the fee is $15.00.

There are no extra fees whatever, but for each laboratory course in chemistry, also for that in practical pharmacy, there is required a deposit of $3.00 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement is now in effect, and will be understood to apply to all students in the Department, entirely irrespective of the date of matriculation.

Alumni of this Department will be admitted to lectures and clinics free of charge, but will pay the usual laboratory fees. Graduates of other medical colleges, which are recognized by this Department, will be admitted to full lecture privileges upon paying the matriculation fee and a fee of $10.00 with the usual laboratory fees.

A certificate of attendance will be issued to each student at the close of the session.

Students upon arrival will apply for all needed information to the Secretary, Dr. E. W. Rockwood.

REQUIREMENTS FOR ADMISSION.

1. Credible certificate of good moral character signed by two physicians of good standing in the state from which the applicant comes.

2. Graduates or matriculates of respectable colleges or graduates of high schools of the first grade, or of normal schools established by state authority, may be admitted without examination upon presentation of satisfactory credentials, provided, that in each case, at least one year of Latin has been included in the course. All candidates for admission must present their credentials or apply for a permit for examination at the office of the President of the University not later than noon of Tuesday, September 12, 1899.

Examination for admission will embrace the subjects usually taught in the high schools of Iowa, including one year's Latin, which subject may, however, be made up before entering upon the second year's course. In September, 1899, those who have no diploma will be examined in Latin (one year), Physics (one year), English, U. S. History, Arithmetic, Algebra through Quadratics, plane and solid Geometry, and Botany, or some other science.

3. Students entering from other medical schools with advanced standing must be examined as stated above.

This school is a member of the Association of American Medical Colleges, and adheres to the requirements of that Association.

COMBINED SCIENTIFIC AND MEDICAL COURSE.

Arrangements have been made with the Faculty of the Collegiate Department by which it will be possible for a student to complete the course in Science and the course in the Medical Department in six years, thereby obtaining the degrees of B. S. and M. D. This combined course is especially recommended to all students who intend to enter the profession of medicine.

COMBINED COURSE LEADING TO THE DEGREES OF B. S. AND M. D.

(Subjects printed in italics are to be taken in the Collegiate Department.)

First Year.

German, 5, or *Latin*, 4 or 5.*

Mathematics, 5.

Drawing, 3.

English, 2.

Military Drill, 3.

Second Year.

German, 3, and *English*, 2; or *German*, 3, and *Economics*, 2; or *Latin*, 5; or *Greek*, 5.

Physics, 5.

Animal Morphology and *Physiology*, 5; or *Systematic Zoology*, 5.

Military Drill, 3.

Third Year.

French, 5; or *Greek*, 5; or *Latin*, 5. (At least one year of *Latin* required.)

Animal Morphology and *Physiology*, 5; or

Botany (fall and winter) and Histology (spring), 5.

Chemistry, 5.

Anatomy (fall and winter) and Dissection (spring), 4.

Military Drill, 3.

Fourth Year.

Anatomy, 5.

Physiology (Medical), 4.

Physiological Chemistry, 2, with laboratory work.

General Pathology, 2.

Materia Medica, 3.

Obstetrics, 2.

Physical Diagnosis, 1.

Bandaging, 1.

*The figures indicate the number of exercises a week. For a full statement regarding collegiate courses of study see University Catalogue, pages 38 to 98.

Pharmacy, 40 hours.

Dissecting when possible.

Embryology and Bacteriology (spring).

Clinics when not otherwise engaged.

Fifth Year.

Junior Medical, with *collegiate electives* in the spring term.

Sixth Year.

Senior Medical, with *collegiate electives* in the spring term.

ADVANCED STANDING.

Students from other accredited medical colleges who have attended one course of lectures, will be admitted to the Sophomore class upon passing an examination in the branches taught during the first year.

Those who have attended two courses will be admitted to the Junior class upon passing an examination in the branches taught during the first and second years.

Those who have attended three courses will be admitted to the Senior class upon passing an examination in the branches taught during the first, second, and third years.

Graduates from colleges in good standing, who, during their college course, have devoted regular time to the study of the following branches: Biology, Botany, Chemistry, Physics, Histology, Physiology, and Human Anatomy may be admitted to the second year of the medical course. Students entering under these conditions must take instruction in Materia Medica and Pharmacy during the first year of their medical course, and at the end of their first session must pass examinations in all branches of the Freshman year not previously pursued by them. They must also have completed the work required of the Sophomore class in the dissection of the human subject.

In all cases those who enter from other schools with advanced standing must comply with the requirements for admission on page 154.

REQUIREMENTS FOR GRADUATION.

1. The candidate must be twenty-one years of age.
2. He must be known to be of unexceptionable moral character.
3. The time of study must include attendance upon at least four

full courses of lectures, the last of which must be taken in this institution. The time occupied by each of the four courses of lectures shall not be less than six months of twenty-six weeks, and no two of the four courses shall be within the same year.

4. The candidate must have satisfactorily completed at least four courses in Practical Anatomy.

5. The deportment during the term must have been unexceptionable.

6. Attendance upon all lectures, clinics, and other instruction in the course must have been in accordance with the requirements of the department.

7. All members of the Freshman class will be examined in General Chemistry, Histology, Physiology, Anatomy, and Materia Medica at the end of that year. The examination in General Chemistry and Histology will be final should the student show the required proficiency.

8. Members of the Sophomore class at the end of that year must pass satisfactory examinations in Anatomy, Physiology, Physiological Chemistry, General Pathology, Materia Medica, Pharmacy, and Hygiene.

9. Members of the Junior class will be given a final examination at the end of the year in Obstetrics, Therapeutics, and Special Pathology.

In case of failure to pass any of these examinations, the student may be reexamined at the opening of the next session. If he fail in this second examination, he will be allowed to present himself for reexamination only after attendance upon another course of lectures.

Students of the Senior class who are candidates for the degree of Doctor of Medicine must, before March first, present to the Secretary of the Faculty a certificate of legal age and of good moral character, also the receipts from the Secretary of the Board of Regents showing that all fees have been paid.

During the last week of the term, having complied with the other requirements, they must pass a satisfactory examination in Practice of Medicine, Surgery, Ophthalmology, Gynecology, Ear, Nose, and Throat and in any other subjects taught, if so directed by the Faculty at the beginning of the term.

Class standing, recitation marks, together with demonstrators' re-

ports and final examinations, will be taken into consideration when determining the candidate's fitness to receive the medical degree.

MEDICAL BUILDING.

The Medical Building is located on the south end of the campus, in a line with the other University buildings. It is one of the best and most commodious medical college buildings in the west. It comprises a basement for general purposes, the first floor containing the office of the Secretary of the Medical Faculty, professors' rooms, the histological laboratory, a lecture room, and the janitor's room.

On the second floor is a spacious and well-lighted pathological and bacteriological laboratory supplied with a sufficient number of microscopes for class-work and with other appliances, prosector's room, and general Faculty room, and a large amphitheatre provided with opera chairs for two hundred and sixty-six students. The third floor is divided into a library and reading room, bandaging room and cloak room.

The fourth floor (80 x 36 feet) used as a dissecting room, is supplied with sinks and water, and each table is lighted with gas.

The whole building is heated with steam and well ventilated.

UNIVERSITY HOSPITAL.

The Twenty-sixth General Assembly levied a tax for the erection of new buildings for the University, and by the action of the Board of Regents the first year's tax, somewhat more than fifty thousand dollars, has been devoted to the building and equipment of a Hospital which was opened for the reception of patients in January, 1898. The University Hospital is in all respects modern and without a superior in the west. With an administration building thoroughly furnished, with large and commodious wards as well as private rooms, with a clinical amphitheatre that will comfortably seat two hundred or more, and with separate surgical, gynecological, medical, ophthalmological, and laryngological operating rooms together with a well supplied Free Dispensary open throughout the year, but little is left to be desired.

It is confidently believed that the students who make the Medical Department of the University the school of their choice will find in

all its departments complete and perfect equipment, both for didactic and illustrative instruction.

RESIDENT PHYSICIANS.

Appointments as Resident Physicians in State and other institutions are made each year from the graduates of the Medical Department. These are awarded to such of the applicants as the Faculty judges best prepared for the position, the successful candidates being allowed to select, in the order of their rank, from those positions which are available.

The appointments for the present year are as follows:

John R. Gardner, University Hospital, Iowa City.

Jesse L. Van Gorden, Mercy Hospital, Davenport.

Board in Iowa City can be obtained for from $2.00 to $3.00 a week; rooms from $2.00 to $8.00 a month. Many students procure rooms and board in clubs, which materially reduces the cost.

NECESSARY YEARLY EXPENSES.

Tuition fee, which includes all University charges except laboratory breakage	$ 65	$ 65
Breakage	1 to	2
Room rent, 6 months	12 to	48
Board, 26 weeks	52 to	78
Fuel and light	6 to	15
Books	12 to	20
Total	$148 to	$228

Graduates of this school are requested to acquaint the Secretary of the Faculty immediately with their postoffice addresses, and to inform him promptly of any change of residence.

For any further information address Dr. E. W. Rockwood, Secretary of the Medical Faculty, Iowa City, Iowa.

UNIVERSITY TRAINING SCHOOL FOR NURSES.

There is connected with the hospital of the Medical Department of the University a School for Nurses which offers a three years' course to women who desire to enter the profession of nursing. Lectures will be delivered by members of the Medical Faculty on Anatomy, Physiology, Materia Medica, Hygiene, Dietetics, Bacteriology, Obstetrics, Gynecology, Infectious Diseases, Diseases of Eye, Ear, Nose, and Throat, Diseases of Children, Medical, Surgical, Obstetrical, and Special Nursing. The Superintendent will lecture upon Hospital Administration and Ward Management, and will give instruction in Massage. There will also be a complete course in invalid cookery. The lectures will be supplemented by recitations as well as by practical work in the wards and operating room. A diploma will be awarded at the end of the course. Candidates may be admitted when vacancies occur.

For further information application should be made to the Superintendent of the University Hospital, Iowa City, Iowa.

OFFICERS AND ATTENDANTS OF THE HOSPITAL.

ELBERT W. ROCKWOOD, B. S., M. D.,
Director.

JENNIE S. COTTLE,
Superintendent.

FRANCIS A. ELY, M. D.,
Resident Physician.

JOHN P. MULLIN, M. D.
Anæsthetizer at the Gynecological Clinic.

NURSES.

Head Nurse.
Clara H. Hearle.

First Year.
Mabel Black.
Ethel Hill.
Margaret Sailor.

Second Year.
Antonia Epeneter.
Mary M. Holden.
Olive P. Howie.
Laura Long.
Emma Thomas.

Third Year.
Amelia Stern.

HOMŒOPATHIC MEDICAL DEPARTMENT.

FACULTY AND ASSISTANTS.

AMOS NOYES CURRIER, A. M., LL. D.,
Acting President, and Acting Dean of the Department.

JAMES GRANT GILCHRIST, A. M., M. D.,
Professor of Surgery and Surgical Gynecology, and Registrar of the Faculty.

CHARLES HERBERT COGSWELL, M. D.,
Professor of Obstetrics and Diseases of Women.

FRANK JOHN NEWBERRY, M. S., M. D., O. et A. Chir.,
Professor of Ophthalmology, Otology, and Pædology.

GEORGE ROYAL, M. D.,
Professor of Materia Medica and Therapeutics.

PHILIP E. TRIEM, A. M., M. D.,
Acting Professor of Theory and Practice.

THEODORE L. HAZARD, M. D.,
Assistant to the Chair of Materia Medica.

FRED J. BECKER, M. D.,
Assistant to the Chair of Surgery.

Assistant to the Chair of Ophthalmology, etc.

ALPHEUS L. POLLARD, M. D.,
Assistant to the Chair of Obstetrics.

MARY A. RAFF,
Matron.

BIGELOW P. BLACKSTONE, M. D.,
House Surgeon.

LEORA JOHNSON, M. D.,
Clinical Assistant to the Chair of Surgery.

ADDITIONAL INSTRUCTORS FROM THE MEDICAL DEPARTMENT.

JOHN W. HARRIMAN, M. D.,
Professor of Anatomy.

ELBERT W. ROCKWOOD, B. S., M. D.,
Professor of Chemistry and Toxicology.

WALTER L. BIERRING, M. D.,
Professor of Pathology and Bacteriology.

WILLIAM R. WHITEIS, M. S., M. D.,
Professor of Histology and Embryology.

LEE WALLACE DEAN, M. S., M. D.,
Acting Professor of Physiology.

W. E. BARLOW, M. A.,
Demonstrator of Chemistry.

WILBER JOHN TEETERS, M. S., PH. C.,
Demonstrator of Chemistry.

GERSHOM H. HILL, A. B., M. D.,
(Superintendent of the Hospital for the Insane at Independence).
Lecturer on Insanity.

Lecturer on Medical Jurisprudence.

HOMŒOPATHIC MEDICAL DEPARTMENT.

THE twenty-third annual course of instruction will open on Wednesday, September 13, 1899 and close on Tuesday, March 27, 1900. The opening lecture will be given by Professor Gilchrist at 4 P. M., in the amphitheatre. The course of study extends over four years. Men and women are admitted on equal terms, no distinction whatever being made between them. The large and well equipped laboratories in the University, the hospital facilities afforded by the union of the college and hospital under one roof, and the opportunity for collateral study in any department of literature or science, furnish facilities for securing an education in medicine not to be surpassed. Furthermore, a diploma from a University of the first rank has a value that does not attach to that of any private school.

A course has been authorized continuing over six years, which will enable the student to obtain the degree of B. S., in addition to the medical degree. See Combined Scientific and Medical Course on page 34 of the University Catalogue.

ADMISSION.

The requirements for admission are the same as in all the professional departments of the University, viz: the possession of a diploma from a high school approved by the University, or some equivalent, as the completion of the Freshman year in a college of letters of approved standing, with a sufficient knowledge of Latin. Failing in these requirements, the applicant for admission to the Freshman class must pass an examination in English scholarship and Latin sufficient to admit to the Freshman class in the Collegiate Department. Applicants for admission to advanced standing must present evidence that they have attended one or more sessions in a reputable medical col-

lege and will be admitted to such class as they may prove themselves qualified to enter. All applicants for admission will apply to the examining committee in the President's office, on Tuesday or Wednesday, September 12 or 13, 1899. If admitted, they will then report for enrollment and assignment of seats at the Registrar's office in the Homœopathic Medical Building on Dubuque street. All fees must be paid to the Secretary of the Board of Regents, *and to him only.*

Advancement to higher classes is secured only by examination, oral and written, combined with the quiz record and class standing. An average of 65 per cent must be secured in any one study to pass that chair; an average of 75 per cent in all the examinations is necessary to pass to a higher class, and to secure a degree. A failure to pass in two or more studies will stop advancement until the conditions are satisfied. A failure in one study will not stop advancement, but the student must pass a satisfactory examination in that study before the close of the year to which he is promoted. The Faculty reserves the right to determine the class which any student shall enter, in the case of applicants who have had one or more years in other medical schools.

Graduates in science or arts, also those with degrees in pharmacy or dentistry, from accredited schools, under the requirements of the State Board of Medical Examiners, may be granted advanced standing equal to one year's credit, on a schedule of studies to be determined in each case.

Graduates of non-homœopathic medical colleges may be admitted as graduate students, as follows: If an *ad eundem* degree is sought they must matriculate in the University, pay a lecture fee and an examination fee, and pass an examination in the therapeutics of the branches taught in this Department. If a degree is not sought, a matriculation fee is to be paid, and such laboratory expenses as may be necessary, together with a lecture fee, if a full course is taken.

Alumni of this school will be admitted to all lectures and clinics free of charge.

By order of the Board of Regents no student will be enrolled until all necessary fees have been paid.

In case any student is unable to pay the fees at the proper time, such student may, on application to the Dean of the Department, be granted an extension for a short time.

Students who do not pay the proper fees or avail themselves of the provision above mentioned, will be suspended from the Department until such fees are paid.

TUITION FEES.

The fee for tuition is sixty-five dollars ($65) for each year, of which forty dollars ($40) is payable on or before October 1st, and the remainder on or before January 10th. There are no extra fees whatever, but for each laboratory course in chemistry, there is required a deposit of $3, to cover breakage, and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student.

The Combined Course in which the degrees of B. S. and M. D. are secured in six years, requires two years in the Collegiate Department, for which the fee is $25 a year. On completion of the Sophomore year, the student enters the Freshman class in medicine, and the fee is $75 for each of the last four years of the course.

The above statement of fees is now in effect, and will apply to all students in the Department, irrespective of the date of matriculation.

OUTLINE OF THE PLAN OF INSTRUCTION.

FRESHMAN YEAR.

Chemistry. This subject is studied through the Freshman year. The course consists of lectures and laboratory work. The lectures treat first of the general principles of the science; then the subjects of interest to the student of medicine are discussed. Especial attention is paid to the compounds found in the body, with their functions and chemical changes. Poisonous substances and such as are of value in practical work are also considered. In the laboratory the student begins with tests for metals, particularly the poisonous ones, and passes to the analysis of complex substances. He learns the methods of manipulation, and becomes familiar with the properties and actions of reagents. The sanitary examination of water follows, with the

analysis of a variety of pure and polluted specimens. The course is concluded with the methods of quantitative analysis which are of most value to the medical practitioner.

Text-books: Simon, Roscoe, and Schorlemmer.

Anatomy. The work in anatomy for the Freshman year will be the study of bones and joints with final examinations on these topics at the close of the term. The anatomy of the intestinal tract and accessory organs will be considered, but this subject will not be completed until the Sophomore year. Two dissections are required in this year, with examinations at the close.

Text-book: Gray.

Physiology. In this subject the inductive method will be very largely employed in imparting instruction. The lectures will be illustrated by diagrams, charts, and by experiments upon the lower animals. The relations between physiology and medical diagnosis will be presented to the student. During the first year lectures will cover the following subjects: General physiology, proximate principles, digestion, absorption, circulation, respiration, excretion, and the general physiology of the nervous system. The lectures upon these subjects will be thorough. At the close of the session there will be an examination, which must be passed before the student can take up the second year's work in physiology.

Text-books: Landlois and Stirling, Stewart, Kirke, Foster, American Text Book.

Histology. The work in this subject runs through the Freshman year. One lecture a week will be given, many of them being illustrated by means of the stereopticon. Two hours each week are devoted to laboratory work in the new histological laboratory, which is commodious, well-lighted, and supplied with thirty-six new compound microscopes, with all necessary accessories, dissecting microscopes, microtomes of various kinds, injecting apparatus, turn-table, etc.

Each student is furnished with microscope, reagents, and apparatus; is taught the use of the microscope; and demonstrates, or has demonstrated before him, the general technique of the subject of histology, hardening, embedding, sectioning, staining, mounting, etc.

Histological injections are made before the class. During the term the student prepares for himself a series of slides, illustrating the ultimate distribution of the blood, and cellular structure of normal tissues and organs.

Text-book: Klein's Manual of Histology.

Organon of the Healing Art. Ten lectures on the Organon will be given, with a view to presenting the teachings of Hahnemann on the causes of disease, on methods of proving remedies, on examining the case for therapeutic purposes, as well as on the principles of homœopathy and the application of the law of similars.

Pharmacology. One hour a week for half of the year will be devoted to the study of the preparation and preservation of drugs, and therapeutic appliances.

Materia Medica. After the Thanksgiving recess, there will be one recitation a week on symptomatology in which Dewey's Essentials of Materia Medica will be used as a text-book. There will be an examination on this subject at the close of the year.

Minor Surgery. Throughout the year, one hour a week, will be used in teaching minor surgery, including the minor surgical operations, use of instruments, and care of the same. An examination will be held at the close of the year.

Clinics. The various clinical lectures are open to Freshmen, who should attend them, as far as their time will allow. It is desirable that they attend them as regularly as possible, but attendance is not made compulsory.

SOPHOMORE YEAR.

Anatomy. The work of the Freshman year will be thoroughly and carefully reviewed, and in addition the anatomy of the genito-urinary organs, the nervous system, and that of the special senses, will be systematically presented. The teaching will be objective, and every care will be taken to present the subjects in a manner to secure the best results. Two dissections are also required during this year, thus making four in the two years. Further advancement may be secured by an examination on all the work of the year.

Physiology. During the second year a careful review of the sub-

jects treated during the first year will be made. The physiology of the nervous system, the function of generation, and the special senses will be thoroughly and comprehensively taught. Final examinations will be held at the close of the year.

Text-books: The same as in Freshman year.

Chemistry. In the Sophomore year physiological chemistry is taken up. The lectures are in explanation and amplification of the laboratory work. The latter includes the study of the proximate principles of the body and their chemical changes; artificial digestion experiments, with the isolation and study of their products; the properties of the constituents of the blood; the methods of testing stains; and the qualitative and quantitative analysis of urine. The course is completed by the identification of urinary sediments and calculi.

Text-books: Rockwood's Laboratory Manual, Vaughan and Novy.

Pathology and Bacteriology. The course in pathology and bacteriology in the Sophomore year is presented by means of didactic lectures and laboratory work. The lectures are devoted to bacteriology, and general and special pathology, and are illustrated by means of drawings, preparations from the medical museum, and specimens derived from post-mortem examinations.

The pathological and bacteriological laboratory is situated in the west hall on the second floor of the Medical Building. It is thoroughly equipped with new microscopes of the most modern type, and all apparatus necessary for carrying on every form of bacteriological research. Each student is provided with a table, a microscope, and all necessary staining reagents.

In this year the lectures are confined to general pathology and the elementary principles of bacteriology. The laboratory work consists of two hours each week throughout the year, is illustrative of the didactic lectures, and comprises the preparation and study of slides showing the general pathological changes that occur in human tissues. An examination will be held at the close of the year.

Text-books: Pathology—Stengel, Ziegler, Thoma, Delafield and Prudden, Green.

Bacteriology—Abbot, McFarland, Crookshank, Sternberg.

Surgical Emergencies. Two lectures a week, throughout the year,

are given on such subjects as anæsthesia, shock, hemorrhage, wounds, and traumatism, fractures, dislocations, and other related topics, which include conditions falling to the care of the general medical practitioner. These subjects are carefully and thoroughly presented, great pains being taken to give the student practical instruction. The course is supplemented by one lecture a week, during a portion of the term, on bandaging and surgical dressings of all kinds.

Physical Diagnosis. Lectures are given weekly, throughout the year, upon physical diagnosis, contrasting normal and pathological conditions, particularly of the chest. This includes practice with modern appliances for reaching a correct diagnosis in diseased conditions.

Materia Medica. During this year three lectures a week are given on materia medica and symptomatology. The mineral remedies will be studied during the session of 1899–1900, with weekly quizzes on the vegetable remedies. A brief review of the toxicological and physiological effects of the drug will be given, then the most prominent and characteristic symptoms. These symptoms will be grouped as they have been found useful for therapeutic purposes.

Text-books: Organon, Dewey's Essentials of Materia Medica, Farrington's Clinical Materia Medica.

Theory and Practice. The teaching will be didactic and clinical. General and special pathology will be taught according to the latest investigations into the etiology and nature of disease. It will be the aim of the occupant of this chair to teach only that which has secured the sanction of competent observers, and which has been confirmed by abundant clinical experience. In teaching the relation of drug pathogenesis to semieology the well established principles of homœopathic therapeutics will be closely and consistently followed. Attendance upon clinics will be obligatory. As the lecture-room is under the same roof with the hospital, admirable opportunities for bed-side instruction are furnished.

Text-books: Dickinson's Theory and Practice, Arndt's System of Medicine, Raue's Special Pathology, Goodno's Practice; for reference, Pepper's Text-book of Theory and Practice of Medicine, Stevens's Manual of Pathology.

Clinics. The Sophomore class is expected to attend all the clinics, in addition to the work outlined above. No amount of purely didactic teaching can possibly compensate for the lack of clinical demonstration.

JUNIOR YEAR.

Anatomy. One hour a week is devoted to surgical and topographical anatomy, fully illustrated. This course is very useful as preparatory to operative surgery and as related to physical diagnosis.

Text-book: Heath's Applied Anatomy.

Pathology. In the Junior year the lectures are devoted to the pathology of tumors, and the special pathology of the different organs of the human body. The laboratory work, consisting of two hours a week throughout the year, bears a direct relation to the lectures, and comprises the preparation and study of slides showing the disease changes that occur in special tissues and organs, including a complete collection of tumors; embodying furthermore the study of the general characteristics of micro-organisms, the preparation of artificial media, and the mounting of slides of the different organisms, with special reference to the pathogenic bacteria that are of great interest to medical men.

Instruction is also given in the technique of making a post-mortem examination.

A final examination in pathology will be held at the close of the Junior year.

Text-books: The same as in Sophomore year.

Toxicology. Instruction in this branch continues through the Junior year. It is given by weekly lectures supplemented by quizzes. The action of the principal poisons is considered, and the antidotes for each are given. The methods of testing for the poisons are explained and illustrated by experiments.

Text-books: Wormley, Taylor.

Physical Diagnosis. One lecture and demonstration a week on physical diagnosis will be given in continuation of the work of the preceding year.

Pædology. Weekly lectures and recitations are given on diseases of children. The subjects taken up are the diseases of infancy, as well

as early childhood, and while largely treated by the didactic method, clinical demonstrations are used whenever possible.

Text-books: Tooker, Fisher.

Materia Medica. The work commenced in the preceding year will be continued. Three lectures a week. In addition one hour a week is given to applied therapeutics, in which cases will be presented (hypothetical or actual), prescribed for, and the indications for the remedies used analytically considered.

Text-books: Farrington's Comparative Materia Medica, and Dunham's Therapeutics.

Ophthalmology and Otology. During this year the instruction in the diseases of the eye and ear is both didactic and clinical. Special stress is laid upon the diagnosis and treatment of those diseases which will most often present themselves in the work of the general practitioner. The didactic teaching is illustrated by models and drawings. The clinics are large and varied, opportunity being thus given to examine and treat the cases presented.

Text-books: Norton, Buffum, Angell.

Laryngology and Rhinology. Instruction is given in laryngology and rhinology to the Junior class by weekly lectures and clinics. Students are assigned cases for treatment, and given ample opportunity to become expert in the use of the laryngoscope, rhinoscope, and other instruments employed in the diagnosis and treatment of the various diseases.

Text-books: Ivin or Brown.

Obstetrics. This branch is commenced in the Junior year. The plan of instruction will be the usual didactic method supplemented by demonstrations, with wet and dry preparations, models and diagrams, together with clinical practice whenever possible. Two lectures a week are given, with occasional quizzes and recitations. The scheme is designed to carry the student forward, after thorough instruction in the anatomy of the pelvis and generative apparatus, through ovulation, menstruation, gestation, and normal labor. Use of the various instruments is taught on the manikin, and every care taken to prepare the students thoroughly for dealing with complications. Dystochia, and all forms of abnormal gestation and labor, are

given in the closing portion of the course. The central idea is to give the practical preference over the merely theoretical.

Text-books: Guernsey, Leavitt and Lusk, Grandin and Jarmen, Obstetric Surgery.

Gynecology. This branch is divided between the chair of obstetrics and surgery. Medical diseases of women are considered by the chair of obstetrics during the last half of the term. The surgical diseases are treated, throughout the year, by the chair of surgery by lectures, clinics, and demonstrations.

Text-books: Wood's Gynecology, Southwick's Practical Gynecology.

Practice. Theory and practice are continued during this year on the general lines already laid down. More prominence is given to clinical instruction, since attendance upon the public clinic is required. The clinical material is abundant and increasing every year; the number and variety of cases presented the last year were very large. Particular effort is made to familiarize the student with such morbid conditions as he is likely to meet in his daily practice.

Text-books: The same as already noted.

Surgical Emergencies. This study is continued during the Junior year, a final examination being held at the close of the term. While all phases of emergency surgery are considered, particular attention is given to fractures and dislocations.

Text-books: Hamilton's Fractures, etc.

Surgical Pathology. Three lectures a week are given on the science and art of surgery, much stress being laid upon differential diagnosis. The clinical lectures are supplemental to the didactic instruction, and attendance is obligatory.

Text-books: Gilchrist's Surgical Pathology, Adams and Chislett's text-book, or Fisher and Macdonald's text-book.

Clinics. Attendance on all the clinics is required of Junior students.

As will be found noted later, the students in this year will be expected to attend the weekly meetings of the Johnson County Homœopathic Medical Society.

SENIOR YEAR.

In this year Practice, Obstetrics, Materia Medica, Gynecology, Ophthalmology, Rhinology, Laryngology, and Surgical Pathology will be continued, and final examinations held at the close of the term. In addition the following will be taken up in short courses.

Operative Surgery. Operations on the cadaver will be made by each student. The operations will be preceded by a short course of lectures on the principles underlying operative treatment, and the legal, professional, personal, and social obligations and amenities of the surgeon.

Applied Therapeutics. Two hours a week are devoted to the study of selected cases, with the purpose of showing the manner of selecting the indicated remedy. This study is carried on in the clinics, where students in this class are required to make diagnosis and prescriptions.

Medical Jurisprudence. A short course is given on forensic medicine by a Professor of the Law Faculty, by appointment, and in such a manner as not to interrupt the regular work of the class. In connection with these lectures the legal status of the medical practitioner, as determined by the various State laws, will be presented and discussed.

Insanity. Alienism and mental disorders, are taught in a short course of lectures, given by appointment.

CLINICS.

The clinics of this department are open to students of all the classes, but the attendance is not obligatory in the Freshman year. All the clinics are full; in some of them the capacity of the hospital has been severely taxed. The general arrangement and clinical system are as follows: The House Surgeon at the commencement of the term details two students from the Senior class as clinical assistants. One of these retires after one week's service, one after two weeks. One student a week is detailed thereafter, so that each Senior student has two consecutive weeks of clinical work. The duties are to assist at all clinics, and to attend to all dressings in the hospital, under the supervision of the House Surgeon. This gives unusual facilities for practical in-

struction. In the medical, eye, and ear clinics each member of the Senior class will be given repeated opportunities for examination of patients, and will be required to diagnose the disease and suggest method of treatment. The clinics are largely patronized, the number of cases and the variety being fully equal to the college clinics elsewhere. The clinics are held as follows:

Medical Clinic. Thursday afternoon, service of the Professor of Theory and Practice.

Surgical Clinic. Saturday morning, service of the Professor of Surgery.

Eye and Ear Clinic. Tuesday afternoon, service of the Professor of Ophthalmology, etc.

Gynecological Clinic. Friday morning, service of the Professor of Gynecology.

Obstetrical Clinics. By appointment, service of the Professor of Obstetrics.

Subclinics. The subclinics are held two or more times a week, to which sections of the Senior class are admitted, where opportunity is afforded all to make examinations in gynecological cases, and the use of various instruments of precision for purposes of diagnosis.

Medical and surgical treatment, and nursing are free for patients entering the general clinics. Board in the hospital is furnished for $7.00 a week.

Correspondence with reference to admission to the clinics or hospital should be had with the professor having charge of the particular clinic, or the Registrar of the Faculty. Arrangements can be made for the reception of a limited number of obstetrical cases, only between the 15th of September and the 15th of February.

DISPENSARY. In connection with the clinics a dispensary has been opened, where the clinical assistants, under the direction of the Faculty, prescribe for and visit out-patients, as well as attend such cases of obstetrics as apply. The dispensary is growing in patronage and influence, and has become a highly important and profitable portion of the work, affording at once material for the clinics and practical instruction to the attendant.

TRAINING SCHOOL FOR NURSES.

A training school for nurses has been authorized by the Board of Regents, the complete course covering three years. The first year is devoted to preliminary studies fitting the pupil for the active work, that is, as nurses in the hospital. Candidates for admission to the Training School must be not under twenty nor over thirty-five years of age, must have a common school education, and must present two letters of recommendation as to their capability, qualifications, and moral character. No other examination for admission will be required.

The first year, covering the preliminary work, begins and closes with the medical term of the University. A fee of five dollars will be charged, payable at the beginning of the term to the Registrar of the Faculty. The work of this year is entirely didactic, consisting of lectures upon anatomy, physiology, special nursing in diseases of the eye, ear, nose, and throat, and on practical nursing. For cases of emergency and home-nursing, this course is especially desirable. Aside from their practical work, during the second year, the nurses will have one recitation each week, and during the third year special topics for essays will be arranged. Those who have completed the preliminary work, at the beginning of the second year, may be entered upon one month's probation in the hospital, during which time they will receive board, lodging, and laundry, but no compensation. If they are found satisfactory, they shall at the end of the first month and during the remainder of the second year in addition to their living, as above, receive $8 a month for personal expenses, with a slight increase during the third year. This sum is not to be regarded as wages, the instruction given being in itself full compensation for all services rendered. Those who complete the three years' course will receive a suitable certificate signed by the President of the University and by the Secretary of the Board of Regents. The graduating exercises occur in connection with those of the Department. For further information address the Matron, Miss Mary A. Raff.

BOARD AND ACCOMMODATIONS.

Good board can be obtained at from $3 to $5 a week. By associating in clubs, students may supply themselves with good accommodations at a material reduction from the customary prices.

Students will be furnished with all necessary information concerning rooms and boarding by applying to the Y. M. C. A. Information Bureau.

REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Medicine (M. D.) in this Department, the student must exhibit to the Dean evidence of having pursued the study of medicine for four years; must have attended four courses of lectures, of at least six months each, the last of which shall have been in this institution; and must be not less than twenty-one years of age.

Arrangements have recently been made with the Faculty of the Collegiate Department by which it will be possible for a student to complete the course in science and the course in the Homœopathic Medical Department in six years, thereby obtaining the degrees of B. S. and M. D. See page 34 of the University Catalogue.

HOMŒOPATHIC MEDICAL ALUMNI ASSOCIATION.

The Alumni Association held its eleventh annual meeting at the College Building, March 28, 1899, at which time the following officers were elected:

President—A. S. HANSEN, M. D., Cedar Falls.

First Vice-President—L. W. STRUBLE, M. D., West Liberty.

Second Vice-President—J. J. METZINGER, M. D., Iowa City.

Secretary—B. P. BLACKSTONE, M. D., Manson.

Treasurer—LEORA JOHNSON, M. D., Iowa City.

Executive Committee—PRESIDENT, SECRETARY, AND TREASURER.

Alumni are urged to send their names to the Secretary, to be enrolled as members. A small admission fee is required, the funds so procured to be donated to the hospital according to a vote taken at the last meeting. Alumni are requested to keep the Secretary informed of change of address.

JOHNSON COUNTY HOMŒOPATHIC MEDICAL SOCIETY.

The meetings of this society are held weekly in the lecture-room of the Department, and have been very useful adjuncts to the instruction given. Senior students are associate members, and enjoy all the privileges of membership, except that of voting and the right to hold office. The Society has proved of the utmost value to all privileged to attend its meetings, from the fact that such topics as degeneration, heredity, sanitation (public and domestic), and many others, are presented by members of other faculties of the University.

Officers for 1899-1900:

President—JAMES G. GILCHRIST, A. M., M. D.
Vice-President—LEORA JOHNSON, M. D.
Secretary—CLARA M. HAZARD, M. D.

Any further information may be obtained by addressing the President of the University, the Dean or Registrar of the Homœopathic Medical Faculty, at Iowa City, Iowa.

DENTAL DEPARTMENT.

FACULTY.

AMOS NOYES CURRIER, A. M., LL. D.,
Acting President.

FRANK THOMAS BREENE, M. D., D. D. S.,
Professor of Operative Dentistry and Therapeutics, and Superintendent of Operative Clinics.

WILLIAM S. HOSFORD, A. B., D. D. S.,
Professor of Prosthetic Dentistry, and Crown and Bridge Work, Superintendent of Prosthetic Clinics, and Dean of the Faculty.

WILLIAM HARPER DEFORD, A. M., M. D., D. D. S.,
Professor of Oral Pathology and Hygiene.

OTHER INSTRUCTORS AND OFFICERS.

WILLLIAM DRUMMOND MIDDLETON, A. M., M. D.,
Professor of Surgery and Clinical Surgery.

ELBERT WILLIAM ROCKWOOD, B. S., M. D.,
Professor of Chemistry and Metallurgy.

WALTER LAWRENCE BIERRING, M. D.,
Professor of Pathology and Bacteriology.

CHARLES SUMNER CHASE, A. M., M. D.,
Professor of Materia Medica and Therapeutics.

JOHN WALTER HARRIMAN, M. D.,
Professor of Anatomy.

WILLIAM ROBERT WHITEIS, M. S., M. D.,
Professor of Histology.

LEE WALLACE DEAN, M. S., M. D.,
Acting Professor of Physiology.

JAMES E. FLEENER, D. D. S.,
Lecturer on Orthodontia.

CHARLES CLEVELAND NUTTING, A. M.,
Lecturer on Comparative Odontography.

ROYAL WINTHROP BALDWIN, D. D. S.,
Lecturer on Regional Anatomy, and Clinical Demonstrator.

A. E. ROGERS, D. D. S.,
Lecturer on Dental Anatomy, and Clinical Demonstrator.

WILLIAM G. CLARK, D. D. S.,
Demonstrator of Porcelain Work.

CHARLES B. LEWIS, D. D. S.,
Demonstrator of Dental Technology.

FRANK B. JAMES, D. D. S.,
Demonstrator of Dental Technology.

WILLIAM EDWARD BARLOW, M. A.,
Demonstrator of Chemistry.

WILBER JOHN TEETERS, M. S., PH. C.,
Demonstrator of Chemistry.

JOHN THOMAS MCCLINTOCK, A. B., M. D.,
Demonstrator of Anatomy.

E. A. SPRAKER,
Custodian.

HELEN BASCHNAGEL,
Clerk.

VISITING CLINICAL INSTRUCTORS.

T. L. JAMES, D. D. S., Fairfield.

C. J. PETERSON, D. D. S., Dubuque.

A. R. BEGUN, D. D. S., Des Moines.

C. A. COPE, D. D. S., Onawa.

K. M. FULLERTON, D. D. S., Cedar Falls.

S. C. HATCH, D. D. S., Sioux City.

GUY HUNTLEY, D. D. S., Mason City.

C. A. PALMER, D. D. S., Grinnell.

C. R. BAKER, D. D. S., Davenport.

DENTAL DEPARTMENT.

INSTRUCTION in this school is given throughout the academic year by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed. The course of instruction is progressive and extends over three years of nine months each. Some of the studies of the first and second years are pursued in connection with the classes in the Medical Department, the student receiving instruction by the same professors, at the same time and place with the medical students, and at the end of the year passing with them the examination.

It is the object of the Faculty to present a complete course of instruction in theory and practice of Dentistry; and for this purpose well-appointed laboratories and infirmaries are provided and such arrangements made as insure an ample supply of patients. Clinical instruction is given by the professors and other instructors, and under the direction of demonstrators patients are assigned to the students, insuring to all opportunity of operating at the chair, and becoming by actual practice familiar with all the operations demanded of the dentist. The infirmaries remain open, and clinical instructors and demonstrators are in attendance daily throughout the school year, offering to students unsurpassed facilities for acquiring practical knowledge and manipulative dexterity.

REQUIREMENTS FOR ADMISSION.

The applicant must present to the Faculty satisfactory evidence of good moral character, and must pass a preliminary examination, or present a diploma or a certificate of graduation from a college, academy, or high school, or a first class teachers' certificate covering the branches enumerated below. Students of both sexes are admitted on equal terms and are afforded the same facilities for acquiring a thorough dental education.

The preliminary examination may be placed in the hands of any state or county superintendent of public instruction. The candidate must make a general average of at least seventy-five per cent in this examination; but he may be admitted with one condition, which, however, must be made up during his Freshman year. The examination will embrace the following branches:

English. Grammar, Composition, Spelling, Punctuation, Grammatical Construction.

Geography. Descriptive and Physical Geography.

History. United States and General History.

Mathematics. Advanced Arithmetic, Algebra through quadratics, Plane Geometry.

Latin. Grammar, declensions, conjugations, construction, translation of easy prose.

Physics. Elementary Physics.

The student may, at the option of the Faculty, substitute any one of the following electives in lieu of one of the preceding studies: Three terms of algebra, through quadratics; three terms of geometry, plane and solid; two terms of physiology; two terms of physical geography; one term of botany, with analysis of forty plants; three terms of general history; three terms of physics; three terms of English literature; two terms of civil government; two terms of history of England; three terms of American literature; three terms of chemistry; one term of commercial arithmetic; two terms of astronomy; two terms of geology; two terms of natural history; one term of political science; two terms of drawing; three terms of German; three terms of Greek; three terms of Latin reading, Cæsar; three terms of Cicero, four orations; three terms of Vergil, six books; one term of book-keeping; three terms of French; three terms of manual training.

Admission of Graduates of Medicine. A diploma from a reputable medical college may entitle the holder to enter the second or Junior grade in colleges of the Association subject to other rules governing admission to that grade.

Admission of Graduates of Pharmacy and Veterinary Medicine. Students qualified according to above heading may matriculate as Juniors subject to other rules governing admission to this grade.

Admission of Undergraduates of Medicine. Undergraduates of reputable medical colleges, who have regularly completed one full scholastic year, having attended at least seventy-five per cent of a five month's term, and passed a satisfactory examination in the studies of the Freshman year, may be admitted to the Junior class, subject to other rules governing admission to that grade.

SCHEDULE OF STUDIES.

First or Freshman Year. Completed the first year: Chemistry, including laboratory, Organic Materia Medica, Histology, including laboratory work, Comparative Anatomy, with Dissection, Dental Anatomy with Technic, and Operative Technic.

Subjects taken the first year and continued through the second year: Anatomy, Physiology, Dental Technology, lectures and laboratory work, and Operative Technic.

Second or Junior Year. Subjects completed the second year: Anatomy with Dissection, Physiology, Organic Chemistry, and Metallurgy, including laboratory work, Inorganic Materia Medica and Therapeutics, Dental Technology, and laboratory work.

Subjects taken the second and continued through the third year: Surgery, Pathology, Therapeutics, Orthodontia Technic, Operative Technic, Operative Dentistry, and Prosthetic Dentistry.

Third or Senior Year. Subjects completed the third year: Oral Surgery, Pathology, Regional Anatomy, Special Histology, Clinical Dentistry, Therapeutics, Dental Art, Special Therapeutics, Practical Bacteriology, Operative Dentistry, Prosthetic Dentistry, Dental Pathology, Hygiene, and Oral Surgery.

All students of the first and second years will be required to pass an examination on the studies pursued in their respective courses before leaving the University at the close of each term. No student who has failed in two of the studies of his course will pass to advanced standing unless these studies are made up before the holiday vacation. No certificates are given to any who fail in more than two branches, except a time certificate stating the actual time of attendance.

COURSE OF LECTURES AND LABORATORY WORK.

OPERATIVE DENTISTRY AND THERAPEUTICS.

To arrest decay and prevent the destruction of human teeth is the ideal work of operative dentistry. To know how to fill teeth well and lastingly is the ambitious desire of every intelligent student of dentistry. In the lectures delivered on this subject the student will be made acquainted with all the useful materials and methods of filling teeth, the use of instruments, and the various manipulations required in a full practice of the operating chair. The same will be fully illustrated and demonstrated by numerous clinics, which will constitute an important feature of the dental instruction. The student is expected to supply himself with such instruments as will enable him to perform all the usual operations of dentistry, under the supervision of the demonstrators. The application of remedies to diseased conditions is taught practically every day upon the patients in the operative clinic. Students who own a dental engine should bring it with them.

CLINICAL DENTISTRY.

In clinical dentistry thorough practical instruction is given in the details of operation, use of materials, instruments, appliances, and the application of remedial agents for the restoration of diseased conditions. The students are required to take charge of patients and perform operations under the supervision of demonstrators. The large number of clinical patients presenting themselves furnishes ample opportunity for a variety of practical work.

PROSTHETIC DENTISTRY.

The instruction in this subject is both didactic and practical. It is the aim to teach not only the mere mechanical processes of Dentistry, but that combination of art with mechanism which enables the practitioner to effect so much in restoring the symmetry of the face and usefulness of the teeth where they have been lost or impaired by accident or disease. Thorough instruction is also given in methods of

restoring the dental organs with crowns of metal, or porcelain, by bridges, and by the making of artificial dentures with bases of metal, rubber, celluloid, aluminum, gold, and porcelain, either alone or in combination.

GENERAL PATHOLOGY AND BACTERIOLOGY.

Pathology and bacteriology are taught during the Junior and Senior years by means of lectures and laboratory work. The work in the Junior year is devoted to general pathology, comprising a study of the general pathological changes, such as circulatory disturbances, degenerations, and inflammations, that occur in human tissues. During the Senior year the work consists of special pathology and bacteriology. It includes the study of forms of new growths and the disease changes occurring in special structures, especially the oral tissues and such changes as come within the sphere of dental surgery.

The bacteriological laboratory is equipped with the most improved apparatus for bacteriological investigation. The work comprises the study of the characteristics of micro-organisms of the buccal cavity and their relation to dental caries and other disease processes. The slides prepared become the property of the student.

HISTOLOGY.

Histology is taught during the Freshman and Junior years by means of lectures and laboratory work. The laboratory work comprises the preparing and study of microscopical slides, showing the minute structure of the different tissues and organs of the human body, with special reference to the digestive apparatus. Instruction is given in the various methods of preparing and staining tissues for microscopical examination, the slides prepared becoming the personal property of the student. During the Junior year the work is continued in the form of special dental histology, which is presented by means of didactic lectures and laboratory work. In the laboratory, each student prepares and studies a collection of slides pertaining to the histology of all the dental tissues and softer structures of the buccal cavity, including a complete series showing the development of the teeth, the slides becoming the property of the student.

ORAL PATHOLOGY.

The work in oral pathology embraces a brief consideration of inflammation and its terminations, pathological conditions incident to first dentition, pathological conditions incident to second dentition, dental caries—various theories and experiments by which conclusions are reached, individual diseases of the teeth,—sensitive dentine, hyperæmia, congestion and inflammation of the pulp, pulp nodules, putrescent pulps, alveolar abscess, acute and chronic, diseases of the peridental membrane, perecementitis, gingivitis, pyorrhœa alveolaris, the tongue and the mouth in diseases of remote parts, various tumors in and about the mouth especially, the epulic tumors, osteoma, simple cystic tumors, dentigerous cysts, diseases of the antrum, ranula, mouth breathing, alveolar necrosis, maxillary necrosis, phosphor-necrosis, epitheleoma, syphilis, particularly mouth manifestations, especially neuralgia and many other practical subjects as seen in practice.

HYGIENE.

The importance of this subject cannot be overestimated when it is understood that decay of the teeth, suppuration of the pulp, alveolar dental abscess, pyorrhœa alveolaris, and perhaps other diseases with which dentists have to contend, are the direct result of unhygienic conditions in the oral cavities. The processes of fermentation, suppuration, and infection in general, are considered, and full instruction given in oral, personal, and office hygiene, and in the best methods of disinfection and antisepsis, including the care of the instruments in daily use.

ORAL SURGERY.

The instruction in this subject combines didactic and clinical teaching. Third year students are expected to attend the surgical clinics.

CHEMISTRY.

The work in chemistry is carried on during two years. It consists lectures and laboratory work. In the Freshman year the lectures treat of the general principles of the science with special attention to their application to dental operations and the needs of the dental

practitioner. The laboratory work is chiefly in qualitative analysis with a view of familiarizing the student with the action of reagents, with chemical manipulations, and with the most important properties of the metals and their compounds.

The lectures of the Junior year will be upon metallurgy and the laboratory work such as shall more fully illustrate the properties of the metals. The methods of refining gold, silver, and platinum will be given, and also those for making and testing alloys and amalgams.

MATERIA MEDICA.

Freshman Year. The Freshman class receives two lectures each week upon the preliminary matter leading to the detailed consideration of drugs proper and organic drugs in particular, inclusive of those of vegetable and animal origin. The preliminary topics include definitions, classification, dosage, routes and modes of administration of remedies, prescription writing, including incompatibilities, metric and common systems of weights and measures, etc. The second division of the subjects, viz., that of organic drugs, takes up their discussion in detail, following a natural and helpful classification based upon the dominant action of a leading drug in each group or class to which such drugs may be assigned. Also the antagonistic and synergistic actions of the drugs are considered in their appropriate places and order. Quizzes, recitations, and written tests are given frequently to aid the student's memory. At the close of the session a review and session-test will be given.

Junior Year. The Junior class completes inorganic materia medica prior to the holiday vacation and reviews the entire subject preparatory to passing the same before the close of the sessional year. After the holidays the class begins general therapeutics, special stress being laid upon those topics that appertain chiefly to dentistry, such as anæsthetics, general and local; coagulants, mineral and vegetable; pain obtunders, sedatives, narcotics, etc. Also such drugs as are comprised in the list of antiseptics, disinfectants, germicides, deodorants, epispostics, escharotics, etc., are specially considered. The consideration of a few of the more prominent and common dental affections, such as abscess of the antrum, alveolar abscesses, pyorrhœa alveolaris, etc., will be briefly discussed from their therapeutic standpoint chiefly.

At the close of the year an examination will be given upon this subject as well as that of materia medica.

ANATOMY.

Anatomy is taught in the first and second years by lectures and recitations, one course in dissection being taken each year.

PHYSIOLOGY.

In this subject the inductive method will be very largely employed in imparting instruction. The lectures will be illustrated by diagrams, charts, and by experiments upon the lower animals. The relations between physiology and medical diagnosis will be presented to the student.

During the first year the lectures will cover the subjects: General physiology, proximate principles, digestion, absorption, circulation, respiration, excretion, and the general physiology of the nervous system. The lectures upon these subjects will be thorough. At the close of the session there will be an examination which must be passed before the student can take up the second year's work in physiology.

During the second year a careful review of the subject treated during the first year will be made. The physiology of the nervous system, the generative system, and the special senses will be studied. At the completion of the second year's work there will be a final examination in this branch.

ORTHODONTIA.

Instruction in orthodontia is given by the use of large charts, demonstrating appliances of practical cases, with special attention to preventive measures for the care of deciduous teeth and corrective treatment during the eruption of the permanent teeth. The course consists also of the treatment of practical cases in the infirmary, the care of which is given to individual students, under the direction of demonstrators in charge, and is also used for class instructions.

REGIONAL ANATOMY.

The instruction in regional anatomy is supplementary to the lectures on general anatomy, and includes a careful description of the bones, muscles, blood vessels, and nerves of the head and face, especially

such as are intimately associated with the physiology and pathology of the dental organs. The lectures are illustrated by maps, charts, and models, and by several well prepared natural specimens of the head, jaws, teeth, and nerves *in situ*.

COMPARATIVE ODONTOGRAPHY.

This course is of unusual practical value. The dental organs and their practical use, comprised in the various orders or families of the animal kingdom, are illustrated by natural specimens, lantern exhibitions, and dissection of the lower animals.

DISSECTION.

Early in the term students make application to the demonstrator of anatomy for places at the dissecting table. Each student is required to dissect at least one part. No charge is made for material.

DENTAL ANATOMY.

This course is supplementary to the subject of general anatomy, and in addition to hearing lectures, each student prepares a series of sections of the natural teeth, making drawings of the same,—showing outlines of tooth forms, pulp chambers, canals, and the relations of the different structures of a tooth. Carving of some of the typical forms of teeth from different materials is also a part of the course. Instruments for this, and the operative technic course will cost from $5 to $10, a list of which will be furnished at the beginning of the term.

PORCELAIN WORK.

The use of porcelain in the various applications to the practice of dentistry is taught, including crowns, bridges, artificial dentures, inlays, etc. Also the use of the various furnaces is demonstrated.

OPERATIVE AND PROSTHETIC TECHNIC.

This course consists of the tempering and making of instruments both for operative and prosthetic work, also the preparation of cavities in the natural teeth out of the mouth and filling of the same with

the different filling materials. The course is thoroughly practical and constitutes a very important feature of the student's work preparatory to the clinical experience.

It is the desire of the Faculty that the dental profession assist in the above course by forwarding to the department all the extracted teeth possible. Express charges will be paid by the department.

DENTAL MUSEUM AND LIBRARY.

Members of the dental profession, dental students, and all persons interested, are invited to contribute to the museum such specimens of malformation, normal or diseased conditions, as will serve for illustration of dental teaching; also to the library any books, pamphlets, journals, or other reading matter pertaining to dental subjects. Such contributions will be duly labeled with the donor's name, and carefully preserved.

LABORATORIES AND CLINIC ROOMS.

The didactic work is supplemented by practical teaching in the laboratory and clinic rooms, with an abundance of patients (6,114 last session). The clinic rooms are equipped fully and completely with Wilkerson and Columbia chairs, cabinets, and all necessary apparatus for the purpose, such as lathes, furnaces for porcelain work, rolling mills, vulcanizers, tables, microscopes, etc. Students are required to supply only the lighter and more portable instruments, the list of which will be furnished on application.

REQUIREMENTS FOR GRADUATION FOR SESSION OF 1899–1900.

The candidate for graduation must be of legal age, and of good moral character; must present to the Faculty and Board of Examiners a satisfactory case of artificial dentistry; also the required clinical record of practical operations on the natural teeth; must sustain a satisfactory examination in the branches taught, and must prove his fitness for the practice of dentistry.

The time of study must include attendance on three courses of lectures, the last of which must be at this institution.

The deportment during the course must have been unexceptionable; and attendance upon all lectures, clinics, and other instruction in the course must have been in accord with the requirements of the department.

Members of the Junior class must be examined finally in anatomy, physiology, organic chemistry, metallurgy, and therapeutics.

Members of the Senior class must notify the Dean of the Faculty in writing during the second week of February of their intention of becoming applicants for the degree of Doctor of Dental Surgery, at the same time presenting a certificate from the Secretary of having paid all fees, with a certificate of legal age and good moral character.

Attendance on any course of lectures in other reputable dental colleges having similar requirements will be accepted as equivalent to a corresponding course in this department. Graduates of medical colleges will be required to attend two full years of instruction in practical dentistry in this institution, including the courses of lectures, before applying for graduation.

Having complied with the requirements of this department, the Faculty and Board of Examiners will recommend the candidate to the Board of Regents as entitled to receive the degree of Doctor of Dental Surgery.

TUITION.

The fee for tuition is $75 for each year, payable $50 on or before October 1, and $25 on or before January 10. There are no extra fees whatever, but a deposit of $3 must be made to cover breakage and loss before beginning work in the chemical laboratory.

The above statement of the fees is now in effect, and will be understood to apply to all students in the department, entirely irrespective of the date of matriculation.

PRACTITIONERS' COURSE.

This course is planned for the convenience and benefit of practitioners. It will be optional with those entering the course as to what studies they will pursue, and what methods in practical work they may take up. The curriculum will be arranged more especially to give a thorough course in pulp and abscess treatment, and other path-

ological conditions of the oral cavity. In addition to this, detailed instruction will be given in bridge and crown work, continuous gum dentures, porcelain fillings, and in the methods of working metals by all the different operations which the practitioner is called upon to perform.

REQUIREMENTS FOR ADMISSION TO PRACTITIONERS' COURSE.

Anyone in reputable practice may enter this course. Those attending the full course of two months will be given a Practitioner's Certificate at the end of the course. Graduates of this department will be admitted on the payment of the matriculation fee only. Graduates of other reputable dental schools will be admitted on payment of the matriculation fee and $10.

A full corps of demonstrators in all subjects has been appointed to attend to the duties pertaining thereto. The service of several additional clinical instructors will be obtained during the session, each a specialist.

FEES FOR PRACTITIONERS' COURSE.

Matriculation fee	$ 5 00
Tickets, including certificates	25 00
Laboratory fee	6 00
	$36 00

DENTAL ASSISTANTS' COURSE.

A training school for dental assistants has been authorized by the Board of Regents. The course will extend through one year of nine months, beginning and ending with the regular dental term. The fee for tuition is $75 for the course, of which $50 is payable on or before October 1, and the balance on or before January 10. Candidates for admission to this course must possess a common school education, and must present two letters of recommendation as to their capabilities, qualifications, and moral character. No other examination for admission will be required. Those completing the course will receive a suitable certificate properly signed, and attested by the seal of the University. This course will be both didactic and practical, thorough instruction being given in operative and prosthetic technic, therapeu-

tics, pathology, and dental anatomy; there are also special lectures and work relative to the duties of an assistant both at the operating chair and in the laboratory.

Credits obtained in this course will be allowed to those desiring to attend and complete the regular dental course, providing the requirements are fulfilled as provided for the regular dental course.

PAYMENT OF FEES.

All fees must be paid promptly, when due, to the Secretary of the Board of Regents, William J. Haddock. Students who do not pay the fees when due will be suspended from the department until payment has been made.

BOARD AND ACCOMMODATIONS.

Board in Iowa City can be obtained for from $2.00 to $3.00 a week; rooms from $2.00 to $8.00 a month. Many students procure rooms, and board in clubs, which materially reduces the cost.

TEXT-BOOKS AND BOOKS OF REFERENCE.

These can be obtained at the bookstores in Iowa City. Dealers give a discount of from ten to twenty per cent. The following are recommended by the Faculty:

Operative Dentistry: American Text-book of Operative Dentistry, Ottellungui, Flagg's Plastics.

Prosthetic Dentistry: Essig's Prosthetic Dentistry, Richardson's Mechanical Dentistry, Evan's Artificial Crown and Bridge Work; collateral reading of Harris's Principle and Practice, American System of Dentistry.

General Pathology: Green, Stengel, Zeigler, Delafield, Prudden.

Bacteriology: Abbott, Crookshank, McFarland.

Histology: Piersol, Schæfer, Stirling, Klein.

Oral Pathology and Hygiene: Greene, Garretson's Oral Surgery, Wilson on Hygiene, Marshall's Diseases of Face, Mouth, and Jaws, Barrett's, Birchard's.

Chemistry: General Chemistry—Wurtz, Bloxam, Witthaus; Qualitative Analysis—Thorpe, Crafts.

Materia Medica: White and Wilcox, Potter.

Therapeutics: H. C. Wood, Potter, Gorgas.

Anatomy: Gray (13th edition), Holden's Landmarks, Quain (10th edition), Holden's Osteology, McClellan's Regional Anatomy, Treve's Applied Anatomy.

Physiology: Foster, Landois and Sterling, Kirk, Stewart.

Orthodontia: Angles, Guilford.

Dental Anatomy: Tomes, Black.

Comparative Anatomy: Howell.

Dictionaries: Harrison, Dunglison, Thomas.

NOTICE.

The National Association of Dental Faculties, of which this department is a member, has passed a rule whereby all students not regularly matriculated within ten days from the opening of any school will not receive credit for a full course. In case one is prevented by sickness, properly certified to by a reputable practicing physician, from complying with the foregoing rule, the time of admission shall not be later than twenty days from the opening day.

The Dental Department of the State University of Iowa complies not only with the rules and conditions of the National Association of Dental Faculties but also with those of the National Association of Dental Examiners.

Students should make their arrangements to be in attendance on the first day of the session, as the Faculty cannot adjust their plans to the tardy arrival of students by wasting time on unimportant lectures at the beginning. Promptness at the beginning of the term is very essential.

Members of the profession who receive this Catalogue are requested to notify the Secretary of any change in their address. They will also confer a favor by sending the names of other dentists practicing in the towns in which they reside. For further information apply to Wm. S. Hosford, Dean of the Dental Department, Iowa City, Iowa.

DEPARTMENT OF PHARMACY.

FACULTY.

AMOS NOYES CURRIER, A. M., LL. D.,
Acting President.

EMIL LOUIS BORRNER, PH. G., PHAR. D.,
Professor of Pharmacy, Director of the Pharmaceutical Laboratory, and Dean of the Faculty.

LAUNCELOT W. ANDREWS, PH. D.,
Professor of Chemistry, and Director of the Chemical Laboratory.

THOMAS H. MACBRIDE, A. M., PH. D.,
Professor of Pharmacognosy, and Director of the Microscopical Laboratory.

CHARLES S. CHASE, A. M., M. D.,
Professor of Materia Medica.

BOHUMIL SHIMEK, C. E.,
Professor of Botany.

E. W. ROCKWOOD, B. S., M. D.,
Lecturer on Toxicology.

PERCY H. WALKER, M. S.,
Instructor in Chemistry.

FRANK N. BRINK,
Assistant in Chemical Laboratory.

ZADA M. COOPER, PH. G.,
Assistant in the Pharmaceutical Laboratory.

CHARLES G. PARK, PH. G.,
Assistant in the Pharmaceutical Laboratory.

DEPARTMENT OF PHARMACY.

THE Department of Pharmacy of the State University of Iowa is designed to furnish pharmacists, and those desiring to engage in pharmacy, an opportunity to acquire a thorough practical education in the departments of science most intimately connected with the practice of that profession. A technical education, such as that offered by the schools of pharmacy, and seldom if ever acquired in drug stores, is as necessary to the accomplished pharmacist as is the special training of a medical course to the physician. The day is not far distant when the pharmacist who is not provided with the evidence of skill which the college diploma furnishes, will labor under equal disadvantages with the non-graduated physician of to-day.

The experience of the past fourteen years has thoroughly demonstrated the practicability of the courses in this Department. This is shown by the readiness with which students of even one session find and hold employment in drug stores, at salaries much higher than they could possibly command without the college training, and by the fact that a much larger percentage of students who have completed one year's work in this school pass the examinations before the State Board of Pharmacy, than of candidates who go before the Board from drug stores, even after several years' experience.

Incidentally, therefore, the courses are well calculated to aid those who desire specially to qualify for the examinations of the State Board of Pharmacy.

It is the aim of the Faculty to make the courses so practical that students will find it not only professionally but also pecuniarily profitable to spend a season or two in the Department.

Sec. 2589 of the Code, relating to the registration of pharmacists, was amended by the Legislature on March 26th, 1898, to read as follows:

Sec. 2589. Examinations—registration. The commission, at such times and places as it may select, and in such manner as it may determine upon, shall examine all persons desiring to engage in and conduct business as registered pharmacists, as contemplated in the preceding section, and, if found competent, the applicant's name shall be entered in the registry book of certificate holders. Graduates of pharmacy holding a diploma from the State University, or from any school or college of pharmacy requiring a course of study and laboratory work equivalent to that prescribed by the said University in its catalogue for the school year 1897–98, shall be entitled to registration as pharmacists without examination. Pharmacists thus registered have the sole right to keep and sell all medicines and poisons, except intoxicating liquors.

The fifteenth annual course of lectures will begin on Wednesday, September 13, 1899, and close on Wednesday, March 28, 1900. There will be a vacation commencing December 21, 1899, and ending January 3, 1900.

BUILDING.

This school is comfortably located in a three-story building, erected at a cost of about fifty thousand dollars, and furnishing about twenty-five thousand square feet of floor space, perhaps the largest accommodations in the way of room enjoyed by any school of pharmacy in this country. The equipment of this building is of the most modern, and in keeping with the advancing stage of the science. Through liberal appropriations periodically made by the Legislature and Board of Regents, the accumulated equipment of some years is being constantly enlarged, and affords excellent facilities for instruction. The lecture-rooms are provided with all desirable conveniences for class demonstration, and with large tablet chairs. The laboratories are especially roomy, the chemical and pharmaceutical laboratories occupying each a floor space of 54x140 feet, divided into two large general and a number of smaller special laboratories. Two forty-horse power boilers supply the steam for all purposes, and a seven-horse power gas engine furnishes the power for drug mill, dynamo, etc.

PRELIMINARY EXAMINATION.

Every applicant for admission to the Junior class will be required to pass a preliminary examination in English, penmanship, geography, and arithmetic, or give satisfactory evidence of having completed such studies in a grammar school.

Admission to the Senior class will be by examination in the branches of study taught during the Junior year. Students presenting evidence of having passed the Junior examination in another recognized college or school of pharmacy will be admitted without further examination.

COURSES OF INSTRUCTION.

The courses of instruction embrace lectures on pharmacy, materia medica, pharmacognosy, botany, chemistry, and toxicology, with practical work in pharmaceutical, microscopical, and chemical laboratories, and almost daily recitations during the term.

About two-hundred and twenty-five lectures are delivered annually to each of the Junior and Senior classes and more than four hundred hours are devoted by each student to practical work in the several laboratories, and to recitations.

Following the precedent established some years ago by some of the older colleges of pharmacy, the graded course is adopted. The full course extends over two years, and the students are divided into Junior and Senior classes, composed of first and second course students, respectively. This arrangement, while adding greatly to the labors of the Faculty, proves of much benefit to students by enabling the professors not only to introduce new and profitable subjects in their departments, but by extending their lectures over two sessions, to take up the elementary work during the first, and the more advanced during the second year.

PHARMACY.

PROFESSOR BOERNER.

The introductory lectures to the Junior class will embrace a short review of the pharmacopœias of the United States, England, France,

and Germany, the various systems and appliances of weights and measures in use by the leading nations; the apparatus and methods necessary for the determination of the specific gravity of solids and liquids, and the sources and management of heat for pharmaceutical purposes. These will be followed by descriptions and illustrations of apparatus necessary to conduct properly the processes of percolation, filtration, comminution, sifting, solution, precipitation, neutralization, evaporation, distillation, sublimation, etc.

The official drugs will be considered by groups, the classification being based upon the more prominent proximate constituents contained in the drugs under consideration, beginning with those substances containing prominently lignin, and passing in order to those containing starches, sugars, gums, resins, oleo-resins, fixed oils, volatile oils, alkaloids, glucosides, neutral principles, etc. All the preparations of a drug will be considered together. To aid the student in memorizing the strength of official preparations, these will be considered by pharmacopœial classifications.

The lectures to the Senior class will begin with a short review of the subjects embraced in the Junior course, followed by a critical study of the preparations of the United States Pharmacopœia, classified according to the character of their active or medicinal constituents. The relation they sustain to each other will be considered, and whenever practicable, the methods of their preparation will be demonstrated, the aim being to apply the theories and general principles taught in the Junior course.

The concluding lectures of the course will be devoted to extemporaneous pharmacy,—such as the preparation of emulsions, pills, suppositories, solutions, ointments, etc., and the dispensing of physicians' prescriptions, the preparation of toilet articles, perfumery, etc.

The adulteration and sophistication to which official preparations are subject, and the methods for their detection will be noticed to the extent which their importance may demand.

CHEMISTRY.

PROFESSOR ANDREWS.

The laboratory work will be divided into two distinct courses, both of which are requisite for graduation, but only one of which can be taken by the student during either of the two college years.

Junior Year. The Junior year comprises instruction in the general principles of chemistry, and in qualitative analysis, arranged with special reference to pharmaceutical preparations.

The lectures elucidate the fundamental laws of the science, demonstrating them, whenever possible, by numerous experiments performed before the class. The chief metallic and non-metallic elements with their more important compounds and reactions are considered. The practical application of the principles of chemical calculation, by which the composition of compounds may be deduced from their formulas, in consequence of its great importance to the pharmacist, is carefully inculcated. Instruction in details of the work, and in matters of manipulation is conveyed in the laboratory course, which occupies, on an average, seven hours a week. Here the student is taught by a systematically arrranged series of experiments the properties of the commonest chemical agents, and how to handle chemical apparatus properly. When some manipulative skill is attained, qualitative analysis is taken up. The characteristic reactions of bodies as applied to their detection in mixtures are made familiar in a series of examples, beginning with the simplest substances, and passing gradually to the more complex, such as are met with in the practice of Pharmacy. The student is expected at the conclusion of this course to be able to test the purity of official preparations and to detect the nature of any adulteration which may be present. He is required to pass a practical examination covering this ground.

Senior Year. Quantitative analysis is taken up, particular emphasis being laid upon volumetric processes, as these, by virtue of the ease and rapidity with which they are executed, are of the greatest general usefulness.

The chemical reactions used for detecting morphine, strychnine and other alkaloidal and coal tar products of pharmaceutical importance

are studied in the laboratory and the class is exercised in the practical analysis of mixtures of such substances.

Practice is given in the valuation of numerous inorganic and organic pharmaceutical preparations, and in the methods of controlling or determining their exact strength. A laboratory examination concludes the course.

PHARMACOGNOSY.

PROFESSOR MACBRIDE.

This course is intended to present the organic Materia Medica from the standpoint of the biologist, with a view to enabling the student to handle his materials intelligently, and to identify them in accordance with the recognized principles of biologic science. The various drugs of organic origin are taken up in the order of their natural classification, the principal facts as to their nature, origin, and preparation are set forth in a series of lectures illustrated by abundant material in original packages, as well as by herbarium specimens (in the case of plants), charts, drawings, microscopic preparations, etc.

Winter. One hour a week, commencing about November 1.

Ample cabinets of Materia Medica are at hand, and free use is constantly made of the magnificent collections now found in the Herbarium of the University.

Text-books: Flueckiger's Principles of Pharmacognosy; Maisch's Materia Medica; Bentley and Trimen's Medicinal Plants; Millspaugh's American Medicinal Plants; The United States Dispensatory; The National Dispensatory.

BOTANY.

PROFESSOR SHIMEK.

Three courses are offered in Botany:

Course 1. General Botany. This course is devoted to a careful study of the elements of the science. The various organs of the plant are reviewed and the local autumnal flora is made to afford abundant material to illustrate, in the hands of the student, the morphology of roots, stems, and leaves, as well as the ordinary principles of floral

analysis, and the means of specific identification. Types of the principal orders of greatest economic value are studied in detail.

Junior Year. Fall term. Two hours a day for the first six weeks.

Course 2. The second course is devoted to an inquiry into the life and growth of the plant; the cell, its morphology and products; the morphology of the entire plant structure as a means of identification. It includes laboratory work with the microscope, and evening lectures illustrated by numerous stereopticon views.

Junior Year. One hour a week during fall and winter terms, following Course 1.

Course 3. Microscopic Technology. This course includes instruction in the use of the compound microscope, and its employment in the investigation of vegetable structures. The student is supplied with an instrument and all necessary reagents and apparatus, and is taught the various modes of cutting, staining, and mounting histological preparations. Practical instruction is given in the use of the microscope in the identification of crude drugs as well as in the detection of adulteration. Each student taking this course prepares at the laboratory for his own use, a cabinet of microscopic slides, illustrative of many of the more important official drugs.

Senior Year. Winter term. Two hours a week.

Students in all these courses are afforded ample laboratory facilities, and the splendid botanical collections in the University Herbarium are always available for illustrations and comparative study.

The following list includes the principal text-books: Macbride's Lessons in Elementary Botany; Wood's Class Book of Botany; Gray's Manual of Botany; Goodale's Physiological Botany.

MATERIA MEDICA.

PROFESSOR CHASE.

This branch will be presented to the students of the Pharmacy Department from a twofold standpoint, namely, that of extemporaneous pharmacy and the prescribing physician. To this end a brief outline course in physiology illustrative of the functions of the more prominent organs of the body will precede the discussion in detail of the

subject matter that more properly belongs to this chair. However, the professor in charge feels that the pharmacist can best serve those who seek his aid by having a general apprehension of a few of the salient points that belong chiefly to the physiologist.

Junior Year. The members of the Junior class will be given preliminary definitions of the subject; also various terms such as alkaloids, glucosides, leucomaines, ptomaines, gums, resins, etc., etc. Also the various official preparations will be defined and discussed. The routes and modes of administration of remedies, their physiological and toxicological action will likewise be considered. The origin, source, composition, chemical characteristics, and physical properties, the modes of preparations, etc., of each drug will be noted briefly, their more elaborate consideration being referred to the chair of Pharmacognosy.

The subject of prescription writing, including incompatibles, their classifications, and their instantaneous detection and means of avoidance will be subjects for careful consideration and drill. Cumulative action of drugs in the system—how it may occur and how avoided—will also be discussed. The common and metric systems of weights and measures will receive due attention. Finally with subject of dosage considered at length, the student will be assumed to be ready to be introduced formally to the chief drugs made use of in his profession. To this end organic drugs of both vegetable and animal origin will be first considered. The student will be required to make full and exhaustive notes on each lecture at the time of its delivery, and also present a carefully prepared transcription of the textual matter found in the text-book used. A very excellent and natural grouping of drugs considered will be followed, based upon the dominant action of the leading drug of the group or class to which such drugs may be assigned. In this manner systematic study is preserved and the subject matter much more easily retained. Frequent quizzing, recitations, and written tests supplement the student's part of the work, thereby facilitating the retention of the facts presented.

Senior Year. This course is an amplification of the preceding. The Senior class is given a rapid review of the subject-matter of the Junior course and then completes the unfinished portion of this part of his work. A brief course in Inorganic Materia Medica is likewise

presented to the members of this class, comprising the more important drugs made use of in pharmacy. With frequent reviews, tests, drills, etc., this class will, before the termination of the session, complete the subject, review and pass it. Prescription writing will be dwelt upon in this course as in the preceding year so as to make sight reading and detection of errors possible. The physiological action of drugs is also specially presented, antagonistic and synergistic remedies being noted. Thus with a review of the entire subject, this class is led to a general comprehension of the fundamental principles and knowledge of the leading drugs used in this important branch of their course.

TOXICOLOGY.

PROFESSOR ROCKWOOD.

The course consists of one lecture a week during the entire session. The general action of poisons is first considered, then the most important ones are treated separately. Their physical properties and chemical action are noticed, together with their uses, and most common sources as toxicological agents. The symptoms of the different classes are given, and the treatment for each. Especial attention is paid to antidotes. Methods of testing suspicious substances, as well as the examination of secretions and excretions, are explained and illustrated by experiments.

PHARMACEUTICAL LABORATORY.

The pharmaceutical laboratory, provided with the necessary conveniences, apparatus, and material for thorough practical instruction will be open daily during the greater part of the school year. The instruction will embrace practice in the use of thermometers, hydrometers, specific gravity bottles, and balances; the preparation of tinctures, syrups, oleo-resins, solid and fluid extracts, pill masses, compound powders, solutions, hypodermic and compressed tablets, and many chemicals, such as the official iron solutions, scale salts of iron, mercury and lead compounds, which the apothecary should and can prepare for himself, both with advantage and profit; extemporaneous pharmacy, including the preparation of emulsions, pills, plasters, sup-

positories, prescriptions, the application of pharmacopœial tests, the manufacture of handkerchief extracts, colognes, sachet-powders, etc.; in short, practice in all the varied duties of a first-class pharmacy. The greatly improved facilities of the laboratory building will permit of the introduction of work found impracticable for preceding classes.

Instruction in this branch is now looked upon as one of the utmost importance in pharmaceutical education, especially as much of the work formerly conducted entirely by the apothecary is now in the hands of large manufacturing establishments, and the student in pharmacy is thereby deprived of many valuable opportunities for gaining the necessary experience and self-confidence in drug stores, which a personal acquaintance with the various manipulations is sure to bring about. The instruction in this laboratory will be individual; the progress made will, therefore, depend upon the student's knowledge and exertions.

All students desiring to graduate from this school are required to pursue this course during the Junior and Senior years.

Students will be furnished with all necessary apparatus and material, but will be required to pay for all breakage or damage to apparatus while in their possession.

TUITION.

The fee for tuition is $75 for each year, of which $50 is payable on or before October 1, and the remainder on or before January 10. There are no extra fees whatever, but for each laboratory course in chemistry or practical pharmacy there is required a deposit of $3 to cover breakage and to insure the return of all keys at the close of the session. This sum (breakage, if any, deducted) is returned to the student on presentation of the certificate of the professor in charge of the laboratory in question.

The above statement of fees is now in effect, and will be understood to apply to all students in the Department, entirely irrespective of the date of matriculation.

All fees must be paid to the Secretary of the Board of Regents, William J. Haddock.

All students who are delinquent in the payment of tuition will be suspended from the Department until the tuition is paid.

QUALIFICATIONS FOR GRADUATION.

Every person upon whom the diploma of this Department is conferred must be of good moral character, have arrived at the age of twenty-one years, have attended two full courses of lectures, the last one of which shall have been in this school, including two full courses of pharmaceutical, microscopical, and chemical laboratory practice, and shall pass satisfactory written examinations in all the branches taught in this school, when he shall be entitled to the degree of Graduate in Pharmacy (Ph. G.).

FINAL EXAMINATIONS.

The examinations of candidates for graduation will take place during the week preceding the close of the lecture season.

WEEKLY EXAMINATIONS.

As auxiliary to the lectures, the professors will hold frequent quizzes in their respective departments, to serve as reviews of the subjects discussed in the lectures.

TEXT-BOOKS.

Pharmacy.—For Juniors: U. S. Pharmacopœia, Remington's Practice of Pharmacy, National Formulary. For Seniors: All the above, Caspari's Treatise on Pharmacy, Coblentz' Handbook of Pharmacy, Scoville's Art of Compounding.

Chemistry.—Pharmaceutical and Medical Chemistry by Sadtler and Trimble.

Pharmacognosy.—Maisch's Organic Materia Medica.

Materia Medica.—White & Wilcox's Materia Medica and Therapeutics, Sayre's Organic Materia Medica and Pharmacognosy, Culbreth's Materia Medica and Pharmacology.

Botany.—Macbride's Lessons in Elementary Botany, Gray's or Wood's Manual, Bastin's College Botany.

REFERENCE BOOKS.

U. S. Dispensatory, National Dispensatory, Fresenius' Analytical Chemistry, Hoffman and Power's Examination of Medicinal Chemicals, Gray's Botanical Text-Book, Vol. II.

BOARD.

The cost of board in clubs is from $1.50 to $2.50 per week; in private houses from $2.50 to $4.00 per week. Rooms can be obtained at from 50 cents to $1.50 per week for each student.

LIBRARIES.

The general library of the University is accessible to students of all departments during eight hours of every week-day. Books may also be drawn for outside use.

One hundred and sixty American and European periodicals are taken, and are kept upon the tables of the reading-room throughout the year.

For further particulars address Emil L. Boerner, Dean of the Department of Pharmacy, Iowa City, Iowa.

DEGREES CONFERRED JUNE, 1898.

COLLEGIATE DEPARTMENT.

MASTER OF ARTS.

Freeman, Mae A., Ph. B.
Hilsinger, George E., A. B.
Merritt, Fred D, B. S.
Watt, W. G., A. B.

MASTER OF SCIENCE.

Bauer, George N., B. S.
Hartman, R. T., B. S.
Lorenz, C. F., B. S.
Savage, T. E., B. S.
Thompson, G. F., Ph. B.

BACHELOR OF ARTS.

Brown, Samuel J.
Gabriel, Jennie May
Gonwick, Clara
Hatch, Daisy Eleanore
Hilsinger, Margaret L.
Hollingsworth, Frank
Hornibrook, Mary
Jacobs, Marcia A.
McCurdy, Lena Adelaide
Morton, Mary Gertrude
Oleson, Ole N.
Otto, Ralph
Sharpe, James Joseph
Smith, Carsten C.
Veblen, Oswald
Weed, Fredmund Carson
Williams, Mark Wayne
Williams, Fred Paul

BACHELOR OF PHILOSOPHY.

Anderson, Theodore
Barker, William Lloyd
Beardsley, John
Blume, Fred H.
Brusie, Ida M.
Carroll, Nancy Grace
Carter, George Henry
Clayton, Joseph Ellsworth
Cobb, Clyde Beryl
Coldren, May Belle
Copeland, Edwin Grant
Corlett, Jessie M.

Denny, Alden Ray
Dunham, Martha Aurilla
Emry, Martha Elva
Eustis, Carl
Frailey, Joseph Robinson
Golden, Ethel Rose
Hastings, Jessie Pearle
Holsteen, Frederick Sophus
Horine, Ora Huntington
Hulsebus, Elizabeth J.
Humphrey, Maude
Kearwille, Elizabeth
Kelley, Mary Celestia
Kriechbaum, Ida Elizabeth
Lenocker, Francis E.
Lindeman, Frank
Lodwick, Libbie
Lowman, Minerva M.
Lytle, Mary
Northey, Della Frances
Otto, Joseph Max
Paxson, Ruthana
Prall, John Cornelius
Preston, Gertrude Elaine
Rea, George Morris
St. John, Maud
Smith, Ralph J.
Smith, William Avery
Soleman, Fred Armstrong
Swisher, Leonard Alonzo
Taylor, Herbert Edward
Weinrich, Herman P.
Welty, Ira Carlton

BACHELOR OF SCIENCE.

Anderson, Robinson Gregg
Hilpert, Meier George
Hobby, Edwin Elmer
Stull, Wilfred N.
Werthmueller, Ferdinand R.
Whitacre, Grace

BACHELOR OF SCIENCE IN CIVIL ENGINEERING.

Johnson, Maro

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING.

Saylor, Earl Clarence

BACHELOR OF DIDACTICS.

Maxson, Charles H.

SPECIAL CERTIFICATE IN GERMAN.

Hulsebus, Elizabeth J.
Kearwille, Elizabeth

LAW DEPARTMENT.

BACHELOR OF LAWS.

Allen, George K.
Anderson, Theodore
Ashe, Thomas G.
Baker, Irving W., Ph. B.
Baker, Jesse C., Jr.
Barrett, Will L.
Bawden, Stephen P.
Beard, Henry C.
Bliven, George H.
Brewster, George F.
Bronner, George A.
Bruce, James
Bushyager, Henry B.
Clark, Charles W., Ph. B.
Clements, Frank H., Ph. B.
Coad, James C.
Cobb, Dennis J.
Cosson, George W.
Davis, Walter M., Ph. B.
Draper, William H.
Dunlap, Ralph L.
Durbin, Fred
Dykins, Charles W.
Eversmeyer, Louise
Fry, Joseph H.
Fuller, Homer, A.
Grattan, Paul H., B. S.
Green, George A.
Hall, James C.
Hamann, Albert W., A. B.
O'Connor, Frank A.
O'Connor, Maurice, B. D.
Plum, William M.
Popham, R. G., A. B.
Price, George M., Ph. B.
Resser, Burt C., A. B.
Rollins, Richard R., B. S.
Sharp, Edward F.
Shure, William H.
Skewis, Edward J.
Smith, William A., B. S.
Hanley, Peter J.
Hanson, Harry W., Ph. B.
Harrison, Albert D.
Head, Roscoe C.
Hering, James C.
Hilsinger, George E., Ph. B.
Hoffman, Arthur
Horton, Frank J.
Hughes, Samuel J.
Hull, John K., Ph. B.
Hyndman, John A.
Kellogg, Charles F.
Kelly, William F.
Klingenberg, Theodore W.
Komarek, Edward W.
Krause, Oscar
Larrabee, Frederic, Ph. B.
Lee, Thomas F., A. B.
Lewis, Burton K.
Liffring, John D.
Livick, Ernest
Long, Frank K., B. D.
McGuire, Augustine J.

McNeil, Harry H., A. B.
Mather, Charles E.
Maxwell, Ezra A., B. S.
Meister, Melvin G.
Meyers, Joseph H., B. Agri.
Murphy, Charles W.
Newbold, Willis B.
Spensley, Robert W.
Swords, George W.
Tyer, Henry W., B. S.
Wagner, Henry F.
Warner, Thomas F., Ph. B.
Watkins, Samuel R., Ph. B.
Watt, Walter G., A. B.
Weed, Howard T.
Welty, Bert B.
Williams, Joe
Wyckoff, Clarence S., B. S.
Youker, Dewitt T.

DEGREES CONFERRED MARCH, 1899.

MEDICAL DEPARTMENT.

DOCTOR OF MEDICINE.

Gardner, John Raphal
Lewis, Charles Ball

HOMŒOPATHIC MEDICAL DEPARTMENT.

DOCTOR OF MEDICINE.

Abbott, Edward C.
Blackstone, Bigelow P.
Calkins, Fred E.
Carver, Harry E., M. S.
Davis, Metta E.
Marble, Pearl L.
McCabe, Fordyce
Metzinger, John J.

NURSES.

Smith, Estella C.
Waite, Carrie I.

DENTAL DEPARTMENT.

DOCTOR OF DENTAL SURGERY, MARCH, 1898.

Barrera, Isaac
Beam, Frank N.
Bingham, Frederick Nathan
Bradley, William Oscar
Brock, Herbert Bruce
Brooks, George
Brown, Curtis Henry
Brown, Sim Chaney
Calhoun, Joseph Farrar
Crandall, Walter Gove
Davis, Walter Arthur
Daugherty, James Bertis
Deetkin, Julius Charles
Dillinger, Hanna
Eickelberg, George Charles
Eichar, Cora Leone
Fawkes, Charles James
Fickes, Josiah Barton
Gable, John Carlton
Gary, Arthur George
Grafton, Charles Warwick
Godlove, George Wesley
Hall, Robert W.
Hayes, Clinton LeGrande
Henle, Mathias Francis
Hirons, Jennie
Hollenbeck, Chas. Dighton
Hood, Guerne Tuttle
Hope, Bird Norris
Johnson, Francis Alexander
Joslin, Walter Trich
Keeler, Howard Denton
Kinsley, Jason Daniel
Lambert, Nella Maxwell
Lawton, Ernest John
Leech, Charles Sloan
Leigh, Lloyd Charles
Lillibridge, William Otis
Lindsay, Clayton Burns
McClelland, Freeman
McClanahan, William B.
McKee, John Wesley
Meis, Herman James
Miller, William C.
Morrow, Burton Allen
Ogg, Mahlon D.
Patton, Jefferson Hollister
Read, William M.
Reynard, May
Rice, James Kinlon
Rundroff, Arthur H.
Sensibaugh, William Chandler
Starbuck, Adelbert W.
Sutton, Harry Burse
Tinker, E. Fay
Torrance, Charles Anderson
Truax, Frederick Elmer
Webb, John Everett
Weikert, William Henry
Wells, Frederick Paine
Wood, George Leroy

DOCTOR OF DENTAL SURGERY, JUNE, 1898.

Decker, Herbert M.
Haley, Frank Richardson
Weymouth, Ida

DEPARTMENT OF PHARMACY.

GRADUATE IN PHARMACY.

Ashford, George Washington
Barr, Henry James
Benham, Lewis Albert
Conry, William LeRoy
Dabney, Maurice John
Delaney, Jerry C.
Hieber, Harvey George
Junger, William Fred
LeFevre, Louis Kountz
Mittvalsky, Edward Charles
Nichols, Fred Claudius
Schaumloeffel, Marie Berenice
Schnier, John Valentine
Swan, Wallace Cantwell

COLLEGIATE DEPARTMENT.

GRADUATE STUDENTS.

CANDIDATES FOR THE DOCTOR'S DEGREE.

Merritt, Fred D, B. S., A. M., Political Economy, Comp. Const. Law.

Stookey, Stephen W., B. S., M. S., Zoology, Botany.

RESIDENT CANDIDATES FOR THE MASTER'S DEGREE.

Anderson, Fannie E. Parker, B. S., U. S. Government, Sociology.

Anderson, Robinson Gregg, B. S., U. S. Government, Sociology.

Anderson, Theodore, Ph. B., Comp. Const. Law, Political Science.

Bowman, Charles H., Ph. B., Physics, Mathematics.

Burge, Albertus J., B. S., Morphology, Zoology.

Butler, Maud B., Ph. B., History, French.

Dilley, Wesley, Y., Ph. B., Political Economy, Government.

Dorcas, Herbert C., Ph. B., Pedagogy, Psychology.

Easton, Burton Scott, B. S., Mathematics, Astronomy.

Ensign, Forest C., Ph. B., Sociology, Pedagogy.

Fracker, George C., Ph. B., Pedagogy, Psychology.

Hatch, Daisy Eleanore, A. B., English, French.

Hensel, Blanche Alice, Ph. B., Latin, Roman Antiquities.

Horack, Frank E., Ph. B., Comp. Const. Law, Philosophy.

Seymour, Libbie, A. B., Pedagogy, Sociology.

Shimek, Bohumil, C. E., Botany, History.

Stull, Wilfred N., B. S., An. Chemistry, Organ. Chem.

Sturm, Frederic Bernard, A. B., German, History.

Thorn, Clifford J., A. B., Comp. Const. Law, Political Philosophy.

NON-RESIDENT CANDIDATES FOR THE MASTER'S DEGREE.

Baker, Irving W., Ph. B.,	Political Philosophy, U. S. History.
Bartsch, Paul, B. S.,	Ornithology, Conchology.
Beckman, Frederick W., Ph. B.,	Government, American History.
Bettenga, Everett P., Ph. B.,	German, Pedagogy.
Briggs, George N., A. B.,	Pedagogy, U, S. Government.
Brown, Florence E., Ph. B.,	Abnormal Psychology, Animal Morphology.
Brown, S. Joe, A. B.,	Pedagogy, Psychology.
Cameron, John E., B. S.,	Botany, Zoology.
Churchill, D. B., Ph. B.,	Sociology, History.
Clayton, Joseph E., Ph. B.,	Geology, Morphology.
Crone, R. B., Ph. B.,	Mediaeval History, Economics.
Fitzpatrick, Mary L., B. S.,	Botany, French.
Fitzpatrick, Thomas J., B. S.,	Botany, Geology.
Hamilton, Arthur S., B. S., M. D.,	Abnormal Psychology, Speculative Zoology.
Hanks, John, A. B., B. D.,	Comp. Const. Law, Modern History
Hearst, W. L., Ph. B., M. D.,	Sociology, History.
Humphrey, Maude, Ph. B.,	Greek Philosophy, Greek History.
Ink, Raymond P., B. C. E.,	Political Science, Psychology.
Jackson, Lester T., B. S.,	Chemistry, Mathematics.
Keeler, W. C., Ph. B.,	U. S. History, Comp. Const. Law.
Lenocker, Francis E., Ph. B.,	Geology, Botany.
McAlvin, James G., Ph. B., M. D.	Sociology, History.
Meissner, John, Ph. B.,	Pedagogy, Political Economy.
Parsons, Louis A., A. B.,	Physics, Mathematics.
Paxson, Susan B., Ph. B.,	Pedagogy, Latin.
Reever, W. H., Ph. B.,	U. S. History, Political Science.
Rigg, G. B., B. S.,	Botany, Morphology.
Sayers, S. Jefferson, Ph. B.,	U. S. History, Administration.
Schlenker, Carl, A. B.,	German Classic Drama, History of Prussia.
Shephard, H. H., A. B.,	Economics, U. S. History.
Smith, Charles L., A. B.,	Central America Plants, History of Botany.
Stevenson, Marcia Jacobs, A. B.,	English, American History.

Thompson, L. L., A. B.,	History, Principles of the U. S. Government.
Williams, H. P., A. B.,	Ethics, Economics.

RESIDENT GRADUATES NOT CANDIDATES FOR AN ADVANCED DEGREE.

Allin, Norra, Ph. B.
Bailey, Charles H., B. S.
Barrett, Mary E., Ph. B.
Brown, Charles Sumner, A. B., (Rochester University.)
Cavanagh, Lucy, Ph. B.
Coldren, May Belle, Ph. B.
Donohoe, Anthony P., B. S.
Hammond, Juliet, A. B., (Smith College.)
Harney, Helen M., A. M.,
Holmes, M. Roberta, A. M.
Holsteen, Fred S., Ph. B.
Hughes, Louise E., A. M.
Lodwick, Libbie, Ph. B.
Neff, Mary Lawson, Ph. B.
Rankin, Evangeline, Ph. B.
Rankin, Luella C., Ph. B.
Savage, Thomas E., M. S.
Smith, Arthur G., A. M.
Smith, Grace Partridge, A. B.
Smith, Ralph J., Ph. B.
Stevenson, S. K., Ph. B.
Thomas, B. Frank, Ph. B.
Teeters, Wilber John, M. S., (University of Michigan.)
Veblen, Oswald, A. B.
Weed, Fredmund C., A. B.
Wickham, Bessie, A. M.
Wickham, Kate, Ph. B.
Zimmerman, Amy, A. B.

SENIOR CLASS.

NAME.	COURSE.	RESIDENCE.
Adams, Georgia	Ph.	Solon.
Balle, Julius E.	Ph.	Denison.
Barber, Nathan Brainerd	Civ. Eng.	Iowa City.
Barclay, Wade Crawford	Cl.	Tiffin.
Blackmore, Ralph Davis	Sc.	Aplington.
Blum, Bertha M.	Cl.	Sioux City.
Bowman, Ernest Charles	Civ. Eng.	Solon.
Bowman, John Gabbert	Cl.	Davenport.
Bradley, Charles C.	Cl.	Council Bluffs.
Brink, Frank N.	Ph.	Atlantic.
Brush, William Burritt	Cl.	Ottumwa.
Burt, Alfred James	Ph.	Emmetsburg.
Chamberlain, Park	Ph.	Wyoming.
Chase, Will B.	Sc.	Des Moines.
Clapp, Helen Leila	Ph.	Shelby.
Clements, Melville Fisk	Civ. Eng.	Agency.
Coad, Harry Elmer	Ph.	Mt. Union.
Codner, Frances T.	Sc.	New London.
Curtis, Maurice Leonard	Cl.	Knoxville.
Dalbey, Irvine J.	Sc.	Olin.
Dean, Ray H.	Sc.	Muscatine.
Dey, Ann Hull	Ph.	Iowa City.
Eaton, Ernest T.	Ph.	Manchester.
Eby, Moray L.	Sc.	Adair.
Ehret, Anna Lillian	Ph.	Iowa City.
Eustis, Carrie Luella	Ph.	Stuart.
Fee, Louis Waller	Sc.	Monmouth.
Foster, Mabel Marcella	Ph.	Iowa City.
Freligh, Clarence Neil	Sc.	New Sharon.
Garrett, Charles Reece	Cl.	Troy.
Gilchrist, Helen Cox	Ph.	Iowa City.
Graff, Lulu A.	Sc.	Iowa City.
Greeley, Lennie Mabyn	Ph.	Iowa City.
Green, Ellen Cecelia	Cl.	Sioux City.

NAME.	COURSE.	RESIDENCE.
Ham, John Webb	Sc.	Iowa City.
Hawk, Ira Tapper	Cl.	Maple Grove.
Hearst, Mamie Francis	Ph.	Cedar Falls.
Holt, John Wesley	Cl.	Swedesburg.
Horack, H. Claude	Ph.	Iowa City.
Howard, John R.	Cl.	Indianola.
Howard, Libbie C.	Ph.	Jefferson.
Hull, Elmer Clapp	Ph.	Iowa City.
Humphrey, Charles William	Ph.	Winterset.
Jackson, James Macomber	Cl.	Orient.
Jarvis, Calvin W.	Ph.	Iowa City.
Jayne, Eben Hay	Civ. Eng.	Iowa City.
Jones, Lillian	Ph.	Iowa City.
Kemmerer, T. Wilbert	Sc.	Eldridge.
Lambert, J. J.	Ph.	Cedar Falls.
Lancaster, Henry Hay	Ph.	Allerton.
Larrabee, Helen	Ph.	Clermont.
Latta, Frank Elwyn	Cl.	Washington.
Lee, Leslie Parvin	Ph.	Iowa City.
Lewis, Charles Levi	Ph.	Cambridge.
Loomis, William W.	Ph.	Clermont.
Lorenz, Max Otto	Cl.	Burlington.
Louis, John Jay	Ph.	Harlan.
McCormick, John Bernard	Cl.	Churdan.
McCurdy, Ralph Bruce	Ph.	Oskaloosa.
MacFarland, Winifred	Ph.	Columbus Junction.
Miller, James Franklin	Civ. Eng.	Strawberry Point.
Morris, William Robert	Ph.	Cotter.
Mosnat, H. Roy	Ph.	Belle Plaine.
Mueller, Herman August	Ph.	McBride.
Myers, Milfred	Ph.	Rockford, Ill.
Myers, Perry C.	Sc.	Williamsburg.
Nelson, John Silford Florid	Ph.	Madrid.
Ogden, John Francis	Ph.	Pleasanton.
Owen, Erza Lois	Ph.	Iowa City.
Patterson, James G.	Ph.	Leighton.

NAME.	COURSE.	RESIDENCE.
Peet, Delbert C.	Ph.	Anamosa.
Rea, Ralph Randolph	Sc.	Grundy Center.
Riggs, Hattie	Ph.	Iowa City.
Roberts, Anna E.	Ph.	Iowa City.
Robinson, Jessie	Ph.	Sioux City.
Safley, Agnes Isabel	Sc.	Tipton.
Schenk, Erwin	Sc.	Waterloo.
Seeds, Sara Ethel	Ph.	Manchester.
Seymour, Edith Maria	Sc.	Iowa City.
Shaffer, Nina R.	Ph.	Iowa City.
Shellenberger, Emma F.	Ph.	Minneapolis, Minn.
Smith, Jay	Sc.	Hancock.
Smith, Tillman	Ph.	Leon.
Sogard, John	Ph.	Pueblo, Colo.
Startsman, Charles Wentworth	Sc.	Iowa City.
Stober, Antonie J.	Ph.	Brooklyn.
Stotts, J. H.	Sc.	Chicago, Ill.
Stover, George E.	Ph.	Iowa City.
Swisher, Benjamin Franklyn	Ph.	Iowa City.
Thorburn, Andrew Logan	Ph.	Webster.
Townsend, Egbert Raymond	Sc.	Iowa City.
Watkins, Joseph Cook	Civ. Eng.	Iowa City.
Weeks, Gaylord	Civ. Eng.	Denison.
Weld, LeRoy Dougherty	Sc.	Cedar Rapids.
Weldy, Morton E.	Cl.	New Sharon.
White, Eva May	Ph.	Maynard.
White, Frank G.	Civ. Eng.	Winterset.
White, Lewis Rush	Ph.	Sioux Rapids.
Wickersham, Dorothy I.	Ph.	Capron.
Willett, William S.	Cl.	Tama.
Williams, Charles Allyn	Cl.	Iowa City.
Williams, Fred Almor	Ph.	Neola.
Williams, Mabel Clare	Ph.	Iowa City.

JUNIOR CLASS.

NAME.	COURSE.	RESIDENCE.
Albert, Henry	Sc.	Reinbeck.
Allen, Henrietta F.	Sc.	Allenwood, Pa.
Andrews, L. H.	Ph.	McBride.
Angus, Haney Adelbert	Sc.	Burt.
Baker, Frank Milton	Ph.	Emmetsburg.
Balle, Minnie Marie	Ph.	Denison.
Barth, George D.	Ph.	Iowa City.
Baughman, Ruby	Cl.	Jefferson.
Beach, Carl Hoff	Sc.	Cedar Falls.
Beard, William Finis	Civ. Eng.	Mt. Union.
Beck, William Edmund	Sc.	Sioux City.
Blackmore, Auzman Hodgen	Sc.	Aplington.
Bloom, Myra	Ph.	Iowa City.
Blythe, Edward Ellsworth	Ph.	Williamsburg.
Boss, Clara Atwood	Cl.	Cedar Falls.
Cass, Austin	Ph.	Harlan.
Chamberlain, Will W.	Ph.	Wyoming.
Childs, Hal Augustan	Sc.	Lenox.
Clearman, Hattie M.	Ph.	Iowa City.
Cogswell, Charles Herbert, Jr.	Sc.	Cedar Rapids.
Cole, Arthur Casburn	Ph.	Waterloo.
Consigny, Eugene Frank	Sc.	Avoca.
Deems, Oren Manferd	Sc.	Burlington.
Dubal, Elinor	Sc.	Iowa City.
Eddy, Helen M.	Ph.	Marengo.
Egan, George William	Cl.	California.
Fairall, Henrietta	Sc.	Iowa City.
Fairall, Herbert Snowden, Jr.	Sc.	Iowa City.
Fellingham, John H.	Cl.	West Side.
Fellingham, Lovinia Marsh	Ph.	West Side.
Ferson, Merton Leroy	Ph.	Frendale.
Fletcher, George H.	Ph.	Cedar Rapids.
Goettsch, Henry Max	Sc.	Davenport.
Harkness, Gordon Follett	Sc.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Hartley, May M.	Sc.	Los Angeles, Cal.
Heath, Maggie May	Ph.	Iowa City.
Hensen, Louis	Ph.	Denison.
Hetzel, Clarence Charles	Sc.	Avoca.
Hoffman, William Louis	Ph.	Waterloo.
Hunt, Percival	Cl.	Cedar Falls.
Hunter, Lemuel Amos	Civ. Eng.	Iowa City.
Hurst, Margaret Lillian	Ph.	Leon.
Johnson, John E.	Cl.	Rock Island, Ill.
Johnson, J. Edward	Ph.	Norway.
Jones, Clyde Ray	Sc.	Charles City.
Kephart, Milton Lawrence	Ph.	Shueyville.
Kindall, Joseph W.	Cl.	Onawa.
Kingland, Thomas A.	Ph.	Mt. Valley.
Klinker, P. J.	Ph.	Denison.
Knapp, Leo	Civ. Eng.	Lenox.
Lambert, Byron J.	Ph.	Cedar Falls.
Lasheck, Adelaide Elizabeth	Ph.	Iowa City.
Louis, Edmund J.	Sc.	Atlantic.
McChesney, Cornelia Ingham	Ph.	Iowa City.
McCord, Clyde W.	Cl.	Iowa City.
McCutchen, Fred Clifton	Ph.	Holstein.
Macomber, Edith Katharine	Ph.	Carroll.
McReynolds, Scott	Ph.	San Bernardino, Cal.
Meggers, Frank Henry, Jr.	Civ. Eng.	Dysart.
Mehaffy, James Harlan	Ph.	Morning Sun.
Mitchell, Ernest Roy	Ph.	Ottumwa.
Moulton, Mark Mills	Cl.	Maquoketa.
Newbold, Belle Edna	Sc.	Hillsboro.
Ogden, Raymond Davis	Ph.	Williamsburg.
Paarmann, J. Herman	Sc.	Davenport.
Page, Clarence Vernon	Cl.	Iowa City.
Page, Edna Elizabeth	Cl.	Iowa City.
Phillips, Albin Blackmore	Sc.	Creamery.
Pinkham, Leda	Ph.	Iowa City.
Polk, Mamie	Cl.	Winterset.

NAME.	COURSE.	RESIDENCE.
Rall, Edward E.	Cl.	Cedar Falls.
Remley, Bertha	Ph.	Anamosa.
Remley, James Edward	Ph.	Anamosa.
Robinson, Alta Aileen	Ph.	Iowa City.
Robish, Albert Arrand	Civ. Eng.	Sumner.
Rogers, Earl Bertram	Sc.	Osage.
Safford, Abbie M.	Sc.	Hamilton, Ill.
Safley, Margaret James	Ph.	Tipton.
Saunders, Herbert C.	Ph.	Manilla.
Scales, Elmo Richard	Ph.	Ackley.
Schoonover, George L.	Ph.	Anamosa.
Schultz, Dorothy M.	Ph.	Burlington.
Shuck, May	Ph.	Iowa City.
Simonton, T. M.	Ph.	Sharon Center.
Speers, Albert Percy	Ph.	Iowa City.
Sprague, Edna Mabel	Ph.	Ft. Dodge.
Springer, William James	Ph.	Decatur City.
Spurgeon, Floris J.	Sc.	Iowa City.
Stockwell, Steven S.	Ph.	Waverly.
Switzer, Leslie Edison	Ph.	Iowa City.
Thompson, John Morrow	Ph.	Bedford.
Twinam, M. Adelaide	Ph.	Crawfordsville.
Tuttle, Stella	Sc.	Webster City.
Waite, Lillian Ethel	Sc.	Iowa City.
Way, Kathryn W.	Ph.	Britt.
Webber, Charles Albert	Cl.	Ferris, Ill.
Weinrich, Oscar L.	Sc.	Burlington.
Wells, Frank	Ph.	Miles.
Werts, Charles M.	Sc.	Russell.
Whitaker, Ellis John	Cl.	Davenport.
Whitcomb, Bonner	El. Eng.	Des Moines.
Whitmore, Clara B.	Ph.	Fairfield.
Wieneke, Laura Anna	Sc.	Iowa City.
Yates, Edward Gilbert	Ph.	Williamsburg.

SOPHOMORE CLASS.

NAME.	COURSE.	RESIDENCE.
Alden, Henry F.	Cl.	Davenport.
Allin, George R.	Ph.	Iowa City.
Anderson, Laura	Ph.	Iowa City.
Anthony, Charles Henry	Sc.	Iowa City.
Arnold, Henry S.	Ph.	Davis City.
Bailey, Frank Sidney	Ph.	Iowa City.
Bailey, Frederick W.	Sc.	Iowa City.
Ball, George Washington, Jr.	Ph.	Iowa City.
Bannister, Robert J.	Ph.	Ottumwa.
Barrett, Anna Moore	Ph.	Iowa City.
Benham, Bessie	Ph.	Shelby.
Birk, Levi Albert	Civ. Eng.	Anamosa.
Bloom, Blanche	Ph.	Iowa City.
Boddy, Marshall V.	Ph.	Ayrshire.
Boler, John	Ph.	Atlantic.
Bond, Perry Avery	Sc.	Sioux City.
Brackett, Otto T.	Sc.	Iowa City.
Briggs, Fletcher	Ph.	Nevada.
Brockway, Alice R.	Ph.	Iowa City.
Brockway, James Madison	Ph.	Iowa City.
Brown Clarence A.	Sc.	Sioux City.
Burge, Jennie	Sc.	River Junction.
Burrier, Emmett Francis	Sc.	Farmington.
Burrus, James H.	Cl.	Winterset.
Burton, Harry E.	Cl.	Onawa.
Byrnes, Ralph L.	Sc.	Iowa City.
Carder, Helen L.	Ph.	Iowa City.
Clapp, Mortimer Edwy	Sc.	Shelby.
Close, Katherine S.	Ph.	Iowa City.
Collins, Frank B.	Ph.	Grundy Center.
Collins, Roy A. Miles	Ph.	Eldora.
Conley, Agnes J. M.	Ph.	New Hampton.
Converse, Charles Crozat	Ph.	Cresco.
Cook, Roy Arthur	Cl.	Independence.

NAME.	COURSE.	RESIDENCE.
Cox, Clifford Vernard	Ph.	Newton.
Cushing, Edith Wylie	Cl.	Davenport.
Daum, Selma	Ph.	West Liberty.
Deck, Margaret Luetta	Sc.	Oskaloosa.
Downing, Ralph V.	Cl.	Wellman.
Drake, Fred Collins	Ph.	Adel.
Dye, Charles Wesley	Sc.	Macedonia.
Eaton, John Alvin	Civ. Eng.	Creston.
Farrington, Minnie M.	Sc.	Iowa Falls.
Fenton, Jennie Inez	Ph.	Eldora.
Fesenbeck, J. Alvin	Ph.	Danbury.
Frank, W. C.	Ph.	Red Oak.
Gilchrist, Janet Marjorie	Ph.	Iowa City.
Gow, Annie Louise	Ph.	Greenfield.
Gow, James Ellis	Ph.	Greenfield.
Griffith, John George	Sc.	Iowa City.
Groendycke, Clara Louisa	Sc.	Gracehill.
Haller, Julius T.	Sc.	Davenport.
Hanson, Frank F.	Ph.	Monmouth.
Hart, Sara L.	Ph.	Iowa City.
Hartman, Amelia	Ph.	Griswold.
Henry, Carl J.	Ph.	Butler, Mo.
Hershire, Mildred	Ph.	Iowa City.
Hickenlooper, Thomas Wallace	Civ. Eng.	Albia.
Hobby, William Richard	Sc.	Iowa City.
Hoffman, Paul M.	Sc.	Muscatine.
Holbrook, Charles Ed.	Ph.	Onawa.
Hospers, John W.	Ph.	Orange City.
Howard, Alice	Sc.	Marshalltown.
Hruska, Victoria	Ph.	Spillville.
Hull, Pearl	Ph.	Iowa City.
Hurst, John Francis	Sc.	Leon.
Ilgenfritz, Burr D.	Ph.	Clarksville.
Jensen, Frank Thomas	Civ. Eng.	Dysart.
Johnson, Emma	Ph.	Farlin.
Jorgenson, James Edwin	Cl.	West Side.

NAME.	COURSE.	RESIDENCE.
Joy, Florence Livingston	Cl.	Iowa City.
Kain, Will E.	Ph.	Algona.
Kelley, Rita Amanda	Ph.	Iowa City.
Kingsbury, Maud Cleavela.	Ph.	Iowa City.
Koontz, G. Wilson	Sc.	Iowa City.
Kuck, Orlando A.	Ph.	Charles City.
McCaffree, Howard A.	Cl.	Waverly Junction.
McCarthy, Mark Joseph	Ph.	Struble.
McClain, Donald	Cl.	Iowa City.
McCord, Charles Joseph	Cl.	Iowa City.
McCulla, Walter Philo	Ph.	Sutherland.
McDonald, Charles S.	Cl.	Council Bluffs.
McElroy, Gilbert A.	Sc.	Thurman.
McGee, Alice Florence	Ph.	Iowa City.
McGee, John W. B.	Ph.	Iowa City.
McKenzie, John A.	Cl.	Living Springs.
McKinney, Henderson H.	Sc.	York, Kansas.
McLaughlin, Harold M.	Sc.	Mason City.
Mann, Loulu Mina	Ph.	Des Moines.
Martin, Katherine	Ph.	Iowa City.
Mauthe, Katherine	Sc.	Gracehill.
Merriau, Fred S.	Cl.	Marble Rock.
Miller, Daniel Fry, Jr.	Cl.	Keokuk.
Moore, William Franklin	Cl.	Dale.
Moser, Edward Parker	Ph.	Eldora.
Noland, Harry B.	Ph.	Cedar Falls.
Otto, Lucia C.	Ph.	Iowa City.
Pearson, Abby B.	Cl.	Dysart.
Perkins, Celia Ethel	Ph.	Keosauqua.
Petersen, Walter H.	Ph.	Davenport.
Peterson, Laura Agnes	Ph.	Marshalltown.
Peterson, Nina M.	Ph.	Needles, Cal.
Porter, M. Monta	Cl.	Albia.
Rankin, Warren L.	Ph.	Carson.
Reed, Luther Oliver	Sc.	Burr Oak.
Remley, Arthur L.	Ph.	Anamosa.

NAME.	COURSE.	RESIDENCE.
Remley, George E.	Ph.	Iowa City.
Reno, Margaret	Ph.	Iowa City.
Riggs, Obie N.	Sc.	Iowa City.
Roberts, Carl Eckley	Cl.	Washington.
Robinson, Claude Lyle	Sc.	Iowa City.
Rosser, Bert P.	Sc.	Troy.
Russell, Earl Willard	Cl.	Adel.
Sanders, George E.	Sc.	Iowa City.
Schlesinger, Leo R.	Sc.	Hampton.
Scott, Jesse Freer	Sc.	Eagle Grove.
Seymour, William T.	Civ. Eng.	Iowa City.
Sheldon, Benjamin L.	Sc.	Iowa City.
Sieg, Lee P.	Sc.	Marshalltown.
Slavata, Jennie	Sc.	Iowa City.
Smith, C. Horton	Civ. Eng.	Iowa City.
Soesbe, Clarence W.	Cl.	Greene.
Sterling, Editha Hortense	Ph.	Iowa City.
Stover, Bessie E.	Sc.	Iowa City.
Stuart, Clara	Ph.	West Branch.
Sweney, Gail	Ph.	Osage.
Swisher, Esther McDowell	Cl.	Iowa City.
Treimer, Anna	Sc.	Dixon.
Tulloss, Carolyn M.	Ph.	Iowa City.
Turner, Nena Belle	Ph.	Peabody, Kas.
Umberger, T. D. Terrill	Sc.	Burlington.
Warren, Madison Clyde	Ph.	Glenwood.
Whedon, Arthur D.	Sc.	Iowa City.
Wiedow, Henry	Sc.	Victor.
Williams, Samuel Clyde	Sc.	Iowa City.
Willis, Bertha B.	Ph.	Iowa City.
Willis, Faith Gertrude	Ph.	Iowa City.

FRESHMAN CLASS.

NAME.	COURSE.	RESIDENCE.
Ashby, Esther Alma	Ph.	Pilotburg.
Ashby, Eleanor	Ph.	Pilotburg.
Ashford, Charles F.	Ph.	Nevada.
Bailey, Edgar	Sc.	Charles City.
Bailey, Katherine Ethel	Ph.	Iowa City.
Baker, Mark Emery	Ph.	Iowa City.
Barber, Myrtle	Ph.	Estherville.
Bartlett, Herbert G.	Ph.	Orchard.
Bell, Everett Garfield	Cl.	Milton.
Bemis, Frances Perl	Ph.	Estherville.
Benge, Nina	Ph.	Winterset.
Berry, Fred S.	Ph.	Sioux City.
Boeger, Myles	Ph.	Davis City.
Boehm, Walter Martinus	Sc.	Ames.
Bond, Ethel May	Ph.	Sioux City.
Borschel, Anna Barbara	Ph.	Morse.
Bourn, Albert	Ph.	Modale.
Brackett, Merritt	Cl.	Iowa City.
Branson, Laura H.	Ph.	Iowa City.
Butler, Lindley M.	Ph.	Forest City.
Calkins, Guy Smith	Ph.	Iowa City.
Call, Roy Guyon	El. Eng.	Iowa City.
Carter, Leila Belle	Ph.	Iowa City.
Casady, Thomas	Cl.	Des Moines.
Chamberlin, Elizabeth	Ph.	North Liberty.
Chantry, Elsie	Ph.	Malvern.
Chantry, Lillian	Ph.	Malvern.
Chesterman, Ethel	Ph.	Sioux City.
Choate, Rufus C.	Ph.	Iowa City.
Clapp, Albert Carpenter	Sc.	Shelby.
Clark, Maude Geneva	Ph.	McGregor.
Clearman, Rollen Ives	Ph.	Iowa City.
Close, Anna S.	Ph.	Iowa City.
Coast, William Oscar	Sc.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Cobb, Dorr Edward	Ph.	Fort Worth, Tex.
Coy, Charles L.	Ph.	Odebolt.
Cronin, Elizabeth	Sc.	Marcus.
Crowell, Charles R.	Ph.	Fremont, Neb.
Cummings, Frank S.	Civ. Eng.	Des Moines.
Currier, Albert Moore	Cl.	Iowa City.
Darrow, J. Don	Ph.	Columbus Junction.
Davis, Mabel Florence	Ph.	Sioux City.
Dayton, Mellie Leona	Ph.	Waukon.
DeKay, Alfred B.	Ph.	Ida Grove.
Dorchester, A. J.	Civ. Eng.	Bellevue.
Dorland, Arthur	Sc.	York, Montana.
Dow, Blanche	Ph.	Iowa City.
Downing, Harold B.	Ph.	Wellman.
DuBois, Walter Lynn	Sc.	Rockwell City.
Dunkel, George	Ph.	Iowa City.
Dunlap, Mary C.	Ph.	Iowa City.
Eberhart, Frank Vaughan	Sc.	Newton.
Eby, Robert	Ph.	Adair.
Eller, Chester J.	Ph.	Pekin.
Emry, Fred Grant	Ph.	Brighton.
Felkner, Wilma	Ph.	Iowa City.
Filer, Paul S.	Cl.	Parkersburg.
Finnicum, Bert	Cl.	Panora.
Fish, James Wilson	Ph.	Britt.
Fitz, Joseph Hamilton	Sc.	Panora.
Fitz, Mary	Cl.	Panora.
Flick, Bruce J.	Ph.	Bedford.
Ford, D. Fae	Ph.	Manchester.
Frazier, Keith	Ph.	Nevada.
Fry, Hayes A.	Ph.	Iowa City.
Funson, Harry S.	Ph.	Nevada.
Geyer, Ellen	Ph.	Cedar Rapids.
Gifford, Judge H. S.	Ph.	Nevada.
Goettsch, Charles	Ph.	Davenport.
Goettsch, Julius	Sc.	Davenport.

NAME.	COURSE.	RESIDENCE.
Goldsmith, W. S.	Sc.	Trenton.
Hall, Ray Edwin	Sc.	Webster City.
Halleck, Joseph Dwight	Ph.	Vinton.
Harris, Fred E.	Ph.	Woodward.
Harvey, James F.	Ph.	Leon.
Hayler, George Rex	El. Eng.	Fort Dodge.
Haynes, Helen Olive	Cl.	Centerville.
Henick, Anna G.	Ph.	Iowa City.
Hess, Sadie Murray	Ph.	Iowa City.
Holmes, Grace Maude	Ph.	W. Waterloo.
Holmes, Hugh B.	Ph.	Iowa City.
Hoover, Alden Robbins	Sc.	Muscatine.
Hornibrook, Freeman H.	Sc.	Cherokee.
Houser, Paulina May	Ph.	Iowa City.
Houts, Frank	Ph.	Hamburg.
Hughes, Homer	Civ. Eng.	Iowa City.
Huntington, Harry Garfield	Ph.	Onawa.
Irvine, Albert Elmer	Ph.	Oelwein.
Jackson, Ernest Andrew	Ph.	Des Moines.
Johnson, H. C.	Ph.	Greene.
Jones, Edna M.	Ph.	Beacon.
Keerl, Harry	Civ. Eng.	Mason City.
Kemp, John Levi	Sc.	Leon.
Kinney, Ross James	Ph.	Panora.
Kirby, James F.	Ph.	Williamsburg.
Koop, Charlotte Calkins	Ph.	McGregor.
Krause, Charles S.	Sc.	Iowa City.
Laartz, C. H.	Ph.	Atlantic.
Lake, Constant Bruce	Sc.	Marengo.
Landers, John C.	Civ. Eng.	Webster City.
Lewis, Margarette Elsie	Ph.	Harlan.
Lillibridge, William Otis	Sc.	Akron.
Linder, Emma Gertrude	Sc.	Iowa City.
Lodwick, Deca	Ph.	Eldon.
Lodwick, Maud	Ph.	Eldon.
Lowman, Stella Elizabeth	Ph.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Lynch, Robert J.	Sc.	Eagle Grove.
Macbride, Jean	Ph.	Iowa City.
McCabe, Richard	Ph.	Clarence.
McCrory, S. H.	Ph.	Ireton.
McCullough, Roy D.	Ph.	Wapello.
McCutchen, Carl Richard	Ph.	Holstein.
McCutchen, James L.	Sc.	Rock Rapids.
McFerren, Rube	Cl.	Webster City.
McKinley, Marie Cathryn Gertrude	Ph.	Iowa City.
Macy, Clarence S.	Ph.	Adel.
Manhard, Edward	Sc.	Farmington.
Marner, Susie	Ph.	Sharon Center.
Marsh, Richard Dana	Civ. Eng.	Marshalltown.
Martin, Thomas Edwin	Sc.	Emmetsburg.
Maudlin, Mina May	Cl.	Ladora.
Mayer, Harry A.	Sc.	Leon.
Mead, Ray C.	Ph.	Wall Lake.
Meade, Edward H.	Ph.	Rockwell City.
Mehaffy, Milton	Ph.	Morning Sun.
Mingus, M. Edna	Cl.	Iowa City.
Moler, M. Imo	Ph.	Iowa City.
Moore, Simon E.	Ph.	Panora.
Morgan, Walter J.	Ph.	Newton.
Morrison, Cameron Swazey	Cl.	Davenport.
Morse, J. Warren	Cl.	Osage.
Morton, Helen Louise	Ph.	Iowa Falls.
Moulton, Helen Field	Cl.	Iowa City.
Mueller, Eugene F.	Ph.	Denison.
Mueller, Mary Theresa	Ph.	Iowa City.
Naftzgar, Jesse Blaine	Sc.	West Liberty.
Namur, Cecilia	Ph.	Iowa City.
Nicking, Herman	El. Eng.	Iowa City.
Nolan, Adelaide M.	Ph.	Jefferson.
Overholt, Mabel	Ph.	Iowa City.
Paarmann, Mrs. J. H.	Ph.	Davenport.
Parsons, Ella Beckley	Ph.	Iowa City.

NAME.	COURSE.	RESIDENCE.
Peters, Louis Gustavus	Ph.	Baldwin.
Phillips, Ray B.	Ph.	Oelwein.
Pinkham, James E.	Ph.	Iowa City.
Plock, Henrietta D.	Ph.	Burlington.
Plum, Vern	Sc.	Avoca.
Popham, Jessie	Ph.	Williamsburg.
Prescott, Bertha Claire	Ph.	Sioux City.
Raguet, Conde LeRoy	Cl.	Washington.
Randall, Frank Hall	Cl.	Denison.
Randall, Van Quincy	El. Eng.	Kansas City, Mo.
Remley, Alfred G.	Ph.	Anamosa.
Reppert, Emma LeMaitre	Cl.	Agency.
Resser, Jesse	Ph.	Perry.
Rich, David W.	Cl.	Wayland.
Roach, Lena	Ph.	Rock Rapids.
Robb, Madge Elston	Cl.	Albia.
Rule, Edward A.	Sc.	Des Moines.
Rule, Harold Vernett	Civ. Eng.	Mason City.
Scales, Alfred J.	Ph.	Ackley.
Scales, Ora E.	Ph.	Ackley.
Slemons, Edson Stuart	Ph.	Butte, Mont.
Smith, Carrie Belle	Ph.	Red Oak.
Smith, Mabel Clare	Cl.	Harlan.
Smith, Maude L.	Ph.	West Liberty.
Speidel, Homer V.	Sc.	Iowa City.
Speidel, Ida Theresia	Sc.	Iowa City.
Stephenson, Winfred Norton	Sc.	Des Moines.
Storck, Arthur H.,	Ph.	De Soto.
Storey, Leslie	Ph.	Iowa City.
Stover, Samuel K.	Ph.	Iowa City.
Sunier, Fannie Annette	Ph.	Iowa City.
Swartz, Raymond H.	Cl.	Creston.
Swisher, Mabel Alice	Ph.	Iowa City.
Switzer, Grace E. E.	Ph.	Iowa City.
Thode, Guy Eugene	Ph.	Stuart.
Thompson, John Wesley	Ph.	Wapello.

NAME.	COURSE.	RESIDENCE.
Tuttle, Lauren Taylor	Ph.	Burlington.
Warner, Joseph Sylvester	Ph.	Leon.
Wells, Leonard Alva	Ph.	Newton.
Whedon, A. D.	Ph.	Iowa City.
Wiley, J. Bertram	Cl.	Buck Grove.
Williamson, Ralph Clinton	Ph.	Iowa City.
Wilson, Leo Armstrong	Sc.	Marengo.
Wilson, Mamie Alwilda	Ph.	Randolph.
Woltman, Mamie Katheryne	Sc.	Iowa City.

SPECIAL STUDENTS.

NAME.	SUBJECT.	RESIDENCE.
Anderson, Oscar Elwood	International Law.	Rochester.
Baker, Horace William	English, Econ.	Morning Sun.
Belsheim, Gullik H.	Logic, Politics.	Leland.
Blakely, Ira Thomas	International Law.	Hope, N. Dakota.
Braman, Hammond	Civil Engineering.	Boston, Mass.
Branjord, Berent M.	International Law.	Randall.
Burdick, Walter Van Buren	English.	Davenport.
Carmichael, Joseph E.	International Law.	Davenport.
Caswell, Clyde	Pol. Economy.	Marshalltown.
Clinite, Frank E.	Pol. Economy.	Independence.
Crary, Frederic	International Law.	Read.
Croxen, William A.	International Law.	Mantens, Ill.
Davies, Alice R.	Hist. Education.	Iowa City.
DeSellem, Zoe E.	English.	Iowa City.
Dewey, J. B.	History.	West Union.
Dickinson, Lester Jesse, B. S.	Politics.	Danbury.
Dunn, James	International Law.	Clinton.
Edmondson, Charles H.	Politics, History.	Milton.
Edson, John Truman	International Law.	Blaine.
Elgin, Charles H.	Psychology.	Centerville.
Erickson, Christian	U. S. Government.	Inwood.
Felkner, Elizabeth A.	Hist. Education.	Iowa City.
French, Remington Fred	Politics.	Independence.

NAME.	SUBJECT.	RESIDENCE.
Gray, Harry B.	International Law.	Plato.
Guldner, L.	German.	Davenport.
Hall, Bert Elias	International Law.	Correctionville.
Hanson, William P.	Politics.	Williamsburg.
Harriman, Levia	English, German.	Iowa City.
Harrison, Ella	International Law.	Carthage, Mo.
Havner, Horace Moore	English, Psychology.	New York.
Hebel, D. A.	English, Econ.	Burlington.
Heninger, Charles C.	International Law.	Martinsburg.
Hindman, Minnie H.	Hist. Education.	Iowa City.
Hobbie, Leslie W.	Physics, Math.	Hampton.
Holly, William R.	Iowa Government.	Meriden.
Hourihan, James	Logic, Pol. Econ.	Mt. Pleasant.
Hubbard, Alice E.	German.	Spencer.
Hummer, William	Spanish.	Iowa City.
James, Frank M.	English, Politics.	Greenfield.
Jebens, Henry H.	International Law.	Davenport.
Johnson, Joseph Oliver, M. Di.	French.	Saude.
Johnson, Karl J.	German.	Osage.
Johnson, Oliver	Physics.	Cedar Falls.
Jones, Elizabeth	Hist. Education.	Iowa City.
Joy, Adelaide Faith	Hist. Education.	Iowa City.
Kelly, Horace Alcinous	German, Math.	Burlington.
Kramer, Anna	German, Botany.	Iowa City.
Landmann, Theodore	Politics.	Scotland, S. D.
Lenz, Ada	English, History.	Cedar Rapids.
Lenz, John G.	English, History.	Cedar Rapids.
Littig, Amy	German.	Iowa City.
Lutz, Walter B., A. B.	Politics.	Oskaloosa.
Lynch, Thomas F.	Politics.	Barnum.
McBeth, Robert.	Politics.	Keosauqua.
McBurney, James W.	Politics, History.	Churdan.
McClain, Henry G.	Greek.	Iowa City.
McCormick, William A.	Politics.	Churdan.
Martin, Etta	Hist. Education.	Iowa City.
Moon, Charles	International Law.	Tipton.

NAME.	SUBJECT.	RESIDENCE.
Moore, Thomas A.	International Law.	West Branch.
Munger, Robert H.	International Law.	Sioux City.
Murphy, Jerry B.	International Law.	Marengo.
Okey, F. C.	International Law.	Corning.
Peregrine, James H., A. B.	International Law.	Corning.
Rule, Arthur L.	International Law.	Mason City.
Safford, Margaret	History.	Hamilton, Ill.
Sargent, Fred W.	International Law.	Vermillion, S. D.
Scully, George A.	International Law.	Ottumwa.
Shillig, Elnora	Hist. Education.	Iowa City.
Smith, Edward A.	Logic, History.	Omaha, Nebr.
Soukup, Albert F.	Economics.	Iowa City.
Steffen, William	Mech. Drawing.	Plain View.
Stimmel, Edward C.	Botany.	Iowa City.
Suhr, John C.	International Law.	West Side.
Tanner, John Frederick	German.	Iowa City.
Tanner, Mayme	English, German.	Iowa City.
Taylor, James Arthur	Politics.	Bloomfield.
Teter, Lorenzo Dow	International Law.	Knoxville.
Thompson, John M., B. S.	International Law.	Marion.
Walsh, Eugene John	International Law.	Clinton.
Watts, Seymor	English, German.	Miles.
Wheeler, Hamilton H.	History.	Kankakee, Ill.
Wheeler, Lucien C.	French.	Cedar Rapids.
Wright, Herbert R.	International Law.	Marshalltown.

LAW DEPARTMENT.

SENIOR CLASS.

NAME.	DEGREE.	RESIDENCE.
Adams, Asa Allen		Mason City.
	B. E., Martyn College.	
Ainsworth, Fanny Louise		West Union.
Allen, Charles Herbert		Scranton.
Anderson, Fannie E. Parker		West Union.
	B. S., Upper Iowa University.	
Anderson, Joseph Robert		Keokuk.
Anderson, Robinson Gregg		West Union.
	B. S., State University of Iowa.	
Baker, George B.		Iowa City.
Balle, Julius Edinger		Denison.
Barker, William Lloyd		Cresco.
	Ph. B., State University of Iowa.	
Barner, Fred Irwin		Cedar Falls.
	B. D., Iowa State Normal.	
Belsheim, Gullik Henry		Leland.
Berry, Ernest James		Alta.
Blackburn, Arthur		Cresco.
Bulman, Walter Washington		Waukon.
Carlson, Albert Barnt		Beresford, S. D.
	B. S., Northern Indiana Normal.	
Condon, Maurice Francis		New Hampton.
Cooper, Francis Augustus		Davenport.
Crary, Samuel Delos		Mapleton.
Crookham, John Addison		Oskaloosa.
Dickinson, Lester Jesse		Danbury.
	B. S., Cornell College.	

NAME.	DEGREE.	RESIDENCE.
Dilley, Wesley Young		Hawarden.
	Ph. B., Cornell College.	
Edson, John Truman		Blaine.
Erickson, Christian		Inwood.
Eustis, Carl		Stuart.
	Ph. B., State University of Iowa.	
Farber, Edwin U.		Davenport.
Fee, Thomas Grant		Centerville.
Fehr, Elmer Lincoln		Oakland.
Flynn, Leo James		Dubuque.
French, Remington Fred		Independence.
Haddock, Paul Stewart		Bedford.
Hagander, Oscar William		Keokuk.
Hall, James Frank		Eddyville.
Hanley, Joseph Rhodes		Muscatine.
Harrington, Timothy P.		Rowan.
Havner, Horace Moore		New York.
Hoag, Lindley Murray		Iowa Falls.
Holbert, Anna Catharine		Iowa City.
Hollingsworth, Frank		Perry.
	A. B., State University of Iowa.	
Holly, William Richard		Meriden.
Huebner, Charles Frederick		Iowa City.
	Ph. B., State University of Iowa.	
Hughes, Samuel Judson		Corydon.
Johnson, Elmer Augustus		Chester.
Kennedy, George Washington		Montrose.
Korf, Henry Christopher		Newton.
Letts, Dickinson		Fairfield.
	B. S., Parsons College.	
Luken, Fernando		Oskaloosa.
	B. L., Oskaloosa College.	
Lynch, Thomas Finn		Barnum.
McBeth, Robert Raymond		Keosauqua.
McCord, Robert Leigh		Lake City.
	A. B., State University of Iowa.	

NAME.	DEGREE.	RESIDENCE.
McKee, John William		Conesville.
Macomber, Charles Coombs		Carroll.
	Ph. B., The University of Chicago.	
Matthews, John R.		Fond du Lac, Wis.
Mattison, George Eaton		Clinton.
Millen, Emmor Henry		Earlville.
Miskimins, Sidney Irwin		Baxter,
Mitchell, Oliver Holmes		Vinton.
Moothart, John Solomon		Primghar.
Morrison, Samuel Turner		Iowa City.
Muekel, Frank Lewis		Dubuque.
Munger, Robert Howe		Sioux City.
Noel, Fred William		Iowa City.
Paisley, Albert Alexander		Burlington.
	A. B., State University of Iowa.	
Patterson, George Elmer		Algona.
Phillips, Leon Paul		Volga City.
Piersol, George Judson		Rockwell.
	Ph. B., Iowa College.	
Prichett, Edward		Fort Madison.
Rohde, Carl Adolph		Davenport.
Ross, Joseph Henry		Cedar Rapids.
Sargent, Amor Hartley		Grundy Center.
	Ph. B., Iowa College.	
Shaver, Bird Alexander		Red Oak.
Smith, Edward A.		Omaha, Neb.
Smith, Ralph J.		Iowa City.
	Ph. B., State University of Iowa.	
Soper, Erastus Burrows, Jr.		Emmetsburg.
	A. B., Columbia University.	
Strauss, Oscar		Des Moines.
	Ph. B., University of Michigan.	
Sullivan, Daniel C.		Nichols.
Talbott, Mina Grant		Carroll.
Tallman, Jesse Milton		Camanche.
	B. S., Cornell College.	

NAME.	DEGREE.	RESIDENCE.
Taylor, James Arthur		Bloomfield.
	B. S., Southern Iowa Normal.	
Thorn, Clifford J.		Washington.
	A. B. Boston University.	
Threlkeld, Delman		Chariton.
Turner, Earl James		Manson.
	B. D., Iowa State Normal.	
Underwood, Mount Vernon		Jesup.
Walker, Gerald Griffin		Blairstown.
Weaver, Abram Cuthbert		Colfax.
Webber, John Francis		Ferris, Ill.
Weed, Fredmund Casson		Corning.
	A. B., State University of Iowa.	
Westrope, Norman Scott		Harlan.
Wheelock, Theodore Morris		Moline, Ill.
White, Arthur Wellesley		Vinton.
	B. S., Northern Indiana Normal.	
Williams, Augustus Burnside		Ottumwa.
Williams, Keota Winona		Ottumwa.
Willoughby, Hugh A.		Grundy Center.
Work, Emmet Alexander		Ottumwa.
	A. B., Iowa Wesleyan University.	

JUNIOR CLASS.

NAME.	DEGREE.	RESIDENCE.
Ainsworth, Alburn Stevens		Fort Dodge.
Anderson, Oscar Elwood		Avoca.
Baer, Bernice Worth		Harlan.
	B. D., Southern Iowa Normal.	
Baker, Horace William		Wapello.
Barnes, Adonis D.		West Liberty.
Bauder, Alpheus Germaine		Elgin.
	B. S., Northern Indiana Normal.	
Birdsall, Maurice		Clarion.

NAME.	DEGREE.	RESIDENCE.
Bittle, Thomas Washington		Lisbon.
	A. B., Cornell College.	
Blakely, Ira Thomas		Hope, N. D.
Boardman, Homer Norman		Nevada.
Borman, August Henry		Elkader.
Bowie, Archie G.		Iowa City.
Branjord, Berent Marlinus		Randall.
Brant, Melbon Roscoe		Iowa City.
Brooke, Robert L.		West Liberty.
Burt, Alfred James		Emmetsburg.
Byrnes, James		Waukon.
Carmichael, Joseph Ellicott		Davenport.
Caswell, C. Clyde		Marshalltown.
Clearman, Lewis Charles Wade		Iowa City.
Clinite, Frank E.		Independence.
Crary, Charles Judson		Lafayette, Ind.
Crary, Frederic		Read.
Croxen, William Arthur		Manteno, Ill.
Davies, Edward Patrick		Floris.
Davisson, Robert Alexander		Indianola.
Dayton, Charles Houghton		Iowa City.
	B. S., State University of Iowa.	
Downing, William Henry		Greene.
Dunn, James		Clinton.
Edmondson, Charles H.		Milton.
Elgin, Charles Henry		Centerville.
Eller, Chester John		Hedrick.
Fletcher, John		Avoca.
Fowler, John Charles		Keokuk.
Gray, Harry Blanchard		Plato.
Hall, Bert Elias		Correctionville.
Hammond, Frank Earl		Hamburg.
Hampson, Frank Christopher		Osage.
Hanley, Charles Parmer		Muscatine.
Harrison, Ella		Carthage, Mo.
Harvey, James F.		Leon.
Hebel, David Andrew		Burlington.

NAME.	DEGREE.	RESIDENCE.
Heninger, Charles C.		Martinsburg.
Hickman, James Harlan		Chariton.
Hirsch, Edward Louis		Burlington.
Holsteen, Fred Sophus		Burlington.
	Ph. B., State University of Iowa.	
Holt, John Wesley		Swedesburg.
Horack, Hugo Claude		Iowa City.
Hornibrook, Edward John		Cherokee.
Hourihan, James		Mount Pleasant.
Howard, John R.		Indianola.
Hubbard, Alice Elizabeth		Spencer.
Hughes, Clinton Boardman		Strawberry Point.
Jebens, Henry Hans		Davenport.
Johnson, John Edward		Iowa City.
Johnson, Joseph Oliver		Saude.
	M. Di., Iowa State Normal.	
Johnson, Karl Johan		Osage.
Kammerer, John		Wapello.
Kennedy, James A. C.		Omaha, Neb.
Koser, George Samuel		Sioux City.
Landmann, Theodore		Scotland, S. D.
Lewis, Dustin Ephraim		Corning.
Lindquist, George Gilbert		Gowrie.
Louis, John Jay		Harlan.
Lutz, Walter Blackburn		Oskaloosa.
	A. B., Penn College.	
Lyngby, Ejnar Viggo		Harlan.
	Exam. Juris., State University of Denmark.	
McCormick, John Bernard		Churdan.
McCormick, William A.		Churdan.
McCurdy, Ralph Bruce		Oskaloosa.
McElroy, Walter Hamilton		Ottumwa.
McGee, John W. B.		Iowa City.
McManus, Vincent P.		Adair.
Moon, Charles Hovey		Tipton.
Moore, Thomas Alton		West Branch.

NAME.	DEGREE.	RESIDENCE.
Murphy, Jerry B.		Marengo.
Murphy, William Henry		Onawa.
Niccolls, George Howard		Morning Sun.
O'Brien, John Edmund		Waukon.
Okey, Frank Clifford		Corning.
	A. B., Princeton University.	
O'Neil, Bernard Thomas		Big Rock.
Otto, Joseph Max		Iowa City.
	Ph. B., State University of Iowa.	
Otto, Ralph		Iowa City.
	A. B., State University of Iowa.	
Parker, Arley Vern		Harlan.
Parry, Alexander Clem		Oskaloosa.
Percy, Allen Truman		Dexter.
Peregrine, James H.		Corning.
	A. B., Parsons College.	
Poston, Leonard Sylvester		Davenport.
Reiley, Robert LeRoy		Wapello.
	A. B., Knox College.	
Reynolds, Hal Reede		Des Moines.
Robinson, I. Barton		Hampton.
Rohde, Albert Edward		Davenport.
Ross, Thomas Alexander		Sioux City.
Rule, Arthur Lynnwood		Mason City.
Ruymann, Adolf		Davenport.
Sailor, George Durell		Iowa City.
	B. S., Cornell College.	
St. Clair, Charles Conklin		Holdrege, Neb.
Sargent, Fred Wesley		Akron.
Schaeffer, George Schuyler		Iowa City.
	A. B., State University of Iowa.	
Scully, George William		Ottumwa.
Shepard, Hugh Hurst		Mason City.
	Ph. B., State University of Iowa.	
Smith, Jay		Hancock.
	Ph. B., Iowa College.	

NAME.	DEGREE.	RESIDENCE.
Snider, William Philip		Granger.
Soukup, Albert Frank		Iowa City.
Sperry, Edward Smith		Hamburg.
Stevens, Fred Leroy		Iowa City.
Suhr, John C.		West Side.
Sullivan, John Lawrence		Clermont.
Swisher, Benjamin Franklin		Iowa City.
Taylor, Herbert Edward		Postville.
	Ph. B., State University of Iowa.	
Teter, Lorenzo Dow		Knoxville.
Thomas, Benjamin Franklin		Traer.
	Ph. B., State University of Iowa.	
Thompson, John McCandless		Marion.
	B. S., Coe College.	
Thorburn, Andrew Logan		Iowa City.
	M. Di., Iowa State Normal.	
Treichler, Rex Oliver		Orient.
True, George Clifford		Oskaloosa.
Walsh, Eugene John		Clinton.
Watters, Joseph Ernest		Grinnell.
Wheeler, Hamilton Harry		Kankakee, Ill.
Wheeler, Lucien Charles		Cedar Rapids.
White, Lewis Rush		Sioux Rapids.
Whitmer, Albert Roy		Wilton Junction.
Whitmer, Samuel Douglas		Wilton Junction.
Wilcox, John Clinton		Montour.
Willett, William S.		Tama.
Williams, Fred Almor		Neola.
Wilson, William Bruce		Moulton.
Wright, Herbert Richard		Marshalltown.

MEDICAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Gardner, John Raphal	Iowa.	Faculty.
Lewis, Charles Ball, D. D. S.,	"	C. G. Lewis.

JUNIOR CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Augustine, Grant	Iowa.	J. L. Augustine.
Bachman, Morris Piper	"	J. L. Heries.
Barker, James Archie, B. Did.	"	C. C. Heady.
Bauer, William John	"	E. N. Brown.
Binford, William Sherwood	"	G. W. Padgham.
Burge, Albertus Joseph, B. S.,	"	L. W. Dean.
Copeland, John Albert	"	J. B. Kessler.
Corsaut, James Colvan	"	W. S. Burrows.
Deters, Willie August	Minnesota.	Faculty.
Gray, Howard D.	Iowa.	C. C. Smead.
Hildreth, Herman Lee	"	Faculty.
Hohenschuh, Frank Adam	"	Faculty.
Hollenbeck, Hubert Lewis	"	L. J. Adair.
Meis, Edward William	"	W. L. Bierring.
Meyhaus, John Henry	"	A. D. Hageboeck.
Neff, Mary Lawson, A. B.	"	Faculty.
Reiter, Alfred E.	"	H. F. Steinle.
Sloan, Arthur Neely	"	R. E. Conniff.
Stuart, Percy Ernest	"	A. W. Adair.
Van Gorden, Jesse Leland	"	J. C. Davies.
Weir, Edward C.	"	A. Weaver.
York, Nathan Albert	"	J. C. Shrader.

SOPHOMORE CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Ainsworth, Willard Charles	Iowa.	E. W. Haradon.
Beach, Lena Alice	"	Faculty.
Beach, Melville Augustus	"	Faculty.
Belsheim, Andrew Gilbert	"	G. G. Belsheim.
Bennett, Henry Sumner	Illinois.	Faculty.
Blackmore, Ralph Davis	Iowa.	E. L. Blackmore.
Brundage, Myron	"	Faculty.
Bullock, William Elmer	"	G. H. Cassidy.
Cantonwine, Eutellis Augustus	South Dakota	Faculty.
Cantwell, John Dalzell	Iowa.	A. W. Cantwell.
Chapman, Horace Ray	"	H. M. McKenzie.
Cretzmeyer, Charles H.	"	W. A. Rohlf.
Daly, Maud	"	Faculty.
DeLespinasse, Adolph Frederick H.	"	J. F. DeLespinasse.
Dennert, Frank	"	J. R. Guthrie.
Ekblad, William, A. B.	Kansas.	Faculty.
Fairchild, Reuben Joel	Illinois.	J. S. Whitmire.
Fitzpatrick, Dennis Francis	Iowa.	Jas. Murphy.
Fisher, Evelyn Battelle, Ph. B.	"	E. W. Clark.
Frank, Carl Schurtz	"	J. C. Wilson.
Gifford, Andrew James	South Dakota	W. H. Lane.
Hall, Elmo Allen	Iowa.	Faculty.
Harlan, Charles D.	"	J. C. Williams.
Harold, Arthur William	"	O. P. Hanson.
Heilman, Ernest Samuel	"	E. C. Heilman.
Hender, Alfred Baker	"	L. W. Littig.
Hews, Lewis DeWitt	"	R. H. Hews.
Hobbs, Samuel Warren, Ph. B.	"	Faculty.
Hoyt, Benjamin	Wisconsin.	J. Simonson.
Honnold, Frederick Jacob	Iowa.	I. M. Lovett.
Jarvis, Fred Jackson	"	J. L. Avery.
Jones, James Franklin, B. S.	"	G. H. Stanger.
Kemmerer, Theodore Wilbert	"	C. T. Kemmerer.
Krejsa, Oldrich	"	Faculty.

NAME.	RESIDENCE.	PRECEPTOR.
Lofgren, Emil	Illinois.	B. C. and S. L. Anderson
Logan, Fred Wallace	Iowa.	E. E. Munger.
Logan, Jay Augustus	Illinois.	John A. Logan.
Long, Henry Shively	Iowa.	Faculty.
Lowry, James David	"	R. Evans.
Luckey, George Miller, A. B.	Illinois.	J. E. Luckey.
McCall, Harry Kenyon	Iowa.	Faculty.
Meadows, Lawrence Harland	"	E. E. Browning.
Meigs, Benjamin Lyle	"	W. A. Chapman and C. V. Artz
Middleton, George McClellan	"	W. D. Middleton.
Morgan, Charles Henry	"	A. W. Adair.
Morton, Lewis Burrows	"	W. M. Morton.
Overholser, John D.	"	Faculty.
Peterson, August John	"	Faculty.
Pence, Roy William	"	D. N. Loose.
Plumer, Lee Elmer	"	A. J. Plumer.
Pringle, Jesse A.	"	L. A. Rogers.
Puleston, Fred	"	A. G. Hejinian.
Ramsey, Guy	"	Jas. Murphy.
Rentz, Charles Bernard	"	E. A. Doty.
Ridenour, Joseph Elmer	"	Faculty.
Sailor, Edwin Allen	"	J. B. Carder.
Schroeder, William	"	J. F. McCarthy.
Sears, Edwin	Illinois.	Faculty.
Shaw, Robert H.	"	Chas. Lanning.
Sheldon, Benjamin L.	Iowa.	Faculty.
Smith, Lizzie	"	Faculty.
Stober, Alvin Martin	"	Faculty.
Speers, Will Frederick	"	C. C. Griffin.
Stanley, Clarence J., B. S.	"	J. S. Love.
Wescott, Leroy Anderson, M. Did.	"	A. F. Walters.
Wheat, Fred Calwell	"	Faculty,
Williams, Benjamin Gregory, B. S.	"	B. F. Andrews.
Wright, Howard Jesse	"	Faculty.

FRESHMAN CLASS.

NAME.	RESIDENCE.	PRECEPTOR.
Agnew, Fred F.	Iowa.	I. Patterson.
Albert, Henry	"	J. L. and F. W. Powers.
Anderson, Harry Nathaniel	"	S. H. Arthur.
Baer, Thomas Horatio	"	Faculty.
Beattie, George Edward	"	Faculty.
Boal, Robert James	"	D. Y. Graham.
Bradley, Edwin Bruce	"	Faculty.
Buell, Frank H.	"	Faculty.
Chase, Will Bronk	"	T. J. Priestly.
Christensen, Christen Jensen	"	N. M. Whitehill.
Clark, Alice May	"	H. H. Clark.
Cobb, Henry Aaron	"	J. E. Conn.
Coffee, Percy Elmo	"	W. O. Coffee.
Cooper, Jay Clark	"	J. W. Sifton.
Cummings, William Cyrus	"	L. F. Cummings
Dawson, Eddy R.	South Dakota.	A. L. Peterson.
Day, William Elton	Iowa.	H. E. Day.
Dingman, Marshall Edwin	"	R. T. Jewell.
Eaton, William H.	"	Faculty.
Edgar, Nelson	"	J. C. Edgar.
Edwards, James Archibald	"	Faculty.
Fairall, Herbert Snowden	"	Faculty.
Farnham, Alford Jay	"	Faculty.
Fiske, Edgar Ellsworth	"	W. P. Burke.
Ford, Harry Garfield	"	W. J. Williams.
Free, Samuel Pratt	"	J. H. Shipley.
Fritchel, Gottfried Constantine	"	Faculty.
Gillett, Omer Rand, Ph. B.	Colorado.	Faculty.
Glynn, Charles Edward	Iowa.	J. M. Glynn.
Graham, Dell Ewing	"	Faculty.
Gray, John Franklin	"	S. T. Gray.
Greear, Clabe Baker	Virginia.	Faculty.
Guldner, Ludwig Frederick	Iowa.	J. W. Crawford.
Hanske, Edward Albert, Ph. G.	"	J. C. Dennison.

NAME.	RESIDENCE.	PRECEPTOR.
Harkness, Gordon Follette	Iowa.	Faculty.
Haxby, Thomas Alderson	"	E. Rawson and G. M. Bilmeyer.
Heller, William Henry	"	F. E. Loomis.
Helmey, Carl Theodore	South Dakota	F. P. Smith and J. R. Naunestad.
Heinen, William Clark	Iowa.	J. W. Everhart.
Henninger, Louis	"	Faculty.
Hornibrook, Freeman Harding	"	Faculty.
Johnson, Charles Curtis	"	W. E. Harriman.
Jones, Henry R.	"	Faculty.
King, Clarence Joshua	"	O. B. McKinney.
Leehey, Florance Patrick	"	Faculty.
Little, Ernest Hartley	"	F. L. Rogers.
Lowrey, Claude	"	C. S. James.
Lundvick, Arthur Wesley	"	Faculty.
McAllister, Fred J.	"	Faculty.
McCauliff, Guy T.	"	Faculty.
McIntyre, Arthur Cecil	"	Faculty.
Maresh, George	"	Faculty.
Nervig, Isaac Eugene	"	Faculty.
Overmass, Sam Edward	"	J. F. Roselle.
Patterson, William Madison	Illinois.	Faculty.
Perry, Eber Rose Butler	Iowa.	J. R. Guthrie.
Pheasant, Ray Linn	Nebraska.	S. O. Whaley.
Phillips, Albin Blackmore	Iowa.	N. W. Phillips.
Reppert, Lyell	"	Faculty.
Rogers, Earl Bertram	"	Faculty.
Scarborough, Bert Vergil	"	Faculty.
Schaefer, Paul Henry	"	Faculty.
Schoenig, Alfred Richard	"	Faculty.
Seashore, David Edward	"	Faculty.
Seashore, Gilbert, A. B.	"	Faculty.
Sherbon, John Bayard	"	H. K. Baird.
Siegfriedt, John Casper Fred	"	W. L. Allen.
Skinner, Arthur Chase	"	G. R. Skinner.
Starbuck, Thomas Davidson	"	Faculty.
Steelsmith, Daniel Clarence	"	Faculty.

NAME.	RESIDENCE.	PRECEPTOR.
Stephenson, Winfred Norton	Iowa.	Faculty.
Tamisea, James Hugh	"	J. L. Tamisea.
Taylor, Charles Irwin	"	Faculty.
Taylor, John Lealand	"	A. B. Brackett.
Thomas, Will Harper	"	Faculty.
Tilden, William Clark, B. S.	"	W. E. Harriman.
Trail, Charles Jeptha	"	Faculty.
Vinson, Harry Warren	"	Faculty.
Voss, Otto	"	J. P. Hoering.
Walliker, Wilbur Myron	"	Faculty.
Wells, James Harlan	"	Faculty.
Wiedow, Henry	"	Faculty.
Wiley, Jesse Bertram	"	Faculty.
Young, John Wray	"	J. W. and H. C. Young.

SPECIAL STUDENTS.

Freligh, Clarence Neil, B. S.
Goodenough, Walter Rue
Middleton, Edward McClellan
Moulton, Louisa, A. B.
Thorner, Maurice
Werts, Charles Martel

HOMŒOPATHIC MEDICAL DEPARTMENT.

SENIOR CLASS.

NAME.	PRECEPTOR.	RESIDENCE.
Abbott, Ed. C.	J. G. Gilchrist,	Iowa.
Blackstone, B. P.	A. L. Pollard,	Iowa.
Calkins, Fred E.	R. W. Calkins,	Nebraska.
Carver, H. E., M. S.	Faculty,	Iowa.
Davis, Metta E.	C. B. Adams,	Iowa.
Marble, Pearl L.	Thos. Phillips,	Iowa.
McCabe, Fordyce	A. C. McAllister,	Iowa.
Metzinger, John J.	Faculty,	Iowa.
Hamilton, Wm. A.	Faculty,	Iowa.

JUNIOR CLASS.

NAME.	RESIDENCE.
Bishop, Alfred H.	Iowa.
Carmichael, Eugene	Iowa.
Coddington, James K.	Illinois.
Eilers, Paul E.	Iowa.
Hill, Alice L.	Iowa.
Hoskins, John B.	Iowa.
Howe, Marion A.	Iowa.
Lenz, John G. (Partial)	Iowa.
McGarvey, Anna M.	Iowa.
Rorabaugh, William E.	Iowa.
Schenck, Erwin	Iowa.
Winters, Rose De L.	Iowa.

SOPHOMORE CLASS.

NAME.	RESIDENCE.
Anderson, George W.	Iowa.
Babcock, Elmer	Iowa.
Blessin, Otto	Iowa.
Cross, George B.	Iowa.
Hubbard, Chester	Iowa.
Kauffman, Edward C.	Iowa.
Kauffman, Ira D.	Iowa.
Launder, Frank T.	Iowa.
Little, Lowell	Nebraska.
Martin, Hobart E.	Iowa.
Maxwell, Adelbert B.	Iowa.
Musgrave, George J.	Iowa.
Parsons, Percy L.	Iowa.
Pond, Issi Otto	Iowa.
Richards, Frank O.	Iowa.
Sarchett, George A.	Iowa.
Snitkay, Chas. J.	Iowa.
Swallum, James A.	Iowa.
Wenzelick, George J.	Iowa.
Wilkinson, Landy A.	Iowa.
Winters, Louis E.	Iowa.

FRESHMAN CLASS.

NAME.	RESIDENCE.
Alden, Geo. W.	Iowa.
Beattie, Geo. E. (Partial)	Iowa.
Bower, Curtis E.	Iowa.
Carolus, Walter J.	Iowa.
Clapp, Archie B.	Iowa.
Cogswell, Chas. H., Jr.	Iowa.
Cooper, Wm. A.	Iowa.
Crew, Arthur E.	Iowa.
Edmunds, Clara	Iowa.
Humeston, Frank E.	Iowa.
Jackson, James M.	Iowa.
Jerrel, Alfred B.	Iowa.

NAME.	RESIDENCE.
Klinefelter, Lewis E. (Partial)	Iowa.
Lathrop, William C.	Iowa.
McCusky, Wm. J.	Iowa.
McDowell, Gilbert T.	So. Dakota.
Page, Clarence V.	Iowa.
Shurtz, Oneida	Iowa.
White, Cheney L	Iowa.
Woods, Samuel, D. E.	Iowa.

SCHOOL FOR NURSES.

HEAD NURSE.

Sara L. Graves.

SENIOR CLASS.

NAME.	RESIDENCE.
Smith, Carrie E.	Iowa City.
Waite, Carrie I.	Wellman.

JUNIOR CLASS.

Blank, Mae E.	Walker.
Dunham, Elva M.	Manchester.
Moore, Mary P.	Mt. Vernon.

PUPIL CLASS.

Conners, Jennie	West Liberty.
Curran, Alma	Washington.
Herrick, Nellie G.	Mt. Vernon.
Watkins, Mac	Des Moines.

Ashby, Eleanor	Pilotburg.
Ashby, Esther	Pilotburg.
Coughlan, Carrie H.	Iowa City.
Edmunds, Clara	Lenox.
Foster, Mabel M.	Iowa City.
Gayman, Leah M.	Iowa City.
Hull, Mrs. C. C.	Iowa City.
Price, Mrs. M. F.	Iowa City.
Pearson, Abby B.	Dysart.

DENTAL DEPARTMENT.

SENIOR CLASS.

NAME.	RESIDENCE.
Albright, L. C.	Primghar, Iowa.
Baumer, J. B.	Iowa City, Iowa.
Booth, J. J.	Marion, Iowa.
Bruce, G. R.	Dubuque, Iowa.
Countrymann, C. C.	Birmingham, Iowa.
Davis, J. C.	Mount Vernon, Iowa.
Davis J. M.	Aledo, Ill.
Gardner, H. H.	Iowa City, Iowa,
Gray, L. B.	Bancroft, Iowa.
Gay, J. C.	Conesville, Iowa.
Hannofin, T. L.	New Albin, Iowa.
Hogan, E. M.	Stuart, Iowa.
Johnson, O.	Cedar Falls, Iowa.
Keeler, C. C.	Des Moines, Iowa.
Kelley, O. R.	Iowa City, Iowa.
Kelley, T. H.	Oxford, Iowa.
Lawrence, W. H.	Armstrong, Iowa.
Long, J. E.	Mount Pleasant, Iowa.
Lowry, W. D.	Davenport, Iowa.
McGarvey, L. E.	Davenport, Iowa.
Mentzer, C. J.	Robins, Iowa.
Morriss, R. E.	La Plate, Mo.
Oyler, W. S.	West Branch, Iowa.
Page, R. R.	Iowa City, Iowa.
Pray, C. H.	Vinton, Iowa.
Penney, C. L.	Stacyville, Iowa.
Seydel, S. J. K.	Iowa City, Iowa.
Stute, F. N.	Lyle, Minn.

NAME.	RESIDENCE.
*Swisher, A. R.	Iowa City, Iowa.
Tullis, G. F.	Ottumwa, Iowa.
Warner, R. T.	Parkersburg, Iowa.
Williams, R.	Council Bluffs, Iowa.
Willey, H. D.	Onawa, Iowa.
Welsh, J. D.	New Albin, Iowa.
Young, Lillian M.	Whittier, Iowa.

JUNIOR CLASS.

Brown, Esther
Chesebro, M. B.
Dessaint, L. R.
Devaney, W.
Dexter, C. J.
Eller, C. L.
Fairall, J. A.
Gibford, H. T.
Gore, F. A.
Griffis, T. R.
Goodenough, G. D.
Hall, E. A.
Hasek, A. M.
Holson, Alliene M.
Holson, E. R.
Kenderdine, W. H.
Knowles, A. C.
Kuster, S. W.
McCartney, O. E.
Mentzer, J. A.
Moore, R. B.
Morris, Robt. C.
Overholt, F. E.
Parsons, C. D.
Robeson, Mary G.
Safford, Margaret L.
Seiler, Agnes
Shannon, R. B.
*Swisher, A. R.
Taylor, M. H.
Thompson, D. L.
Vorwald, T.
Will, R. T.
Woolverton, Ella G.
Young, A. S.

FRESHMAN CLASS.

*Allen, Henrietta F.
Benson, G. C.
Birchard, T. L.
Bowen, D. H.
Boysen, H. A.
†Boller, J. H.

* Irregular.
† Not in Attendance.

Cameron, W. J.
Cannom, W. L.
Carpenter, L. D.
Chamberlain, L.
Davis, J. A.
Davis, J. D. C.
Davis, R. K.
De Lespinasse, A. F.
Dewey, J. B.
Faber, A. J.
Fraser, M. O.
Gilbreath, F. M.
Glass, A. W.
Godlove, L. L.
Graybeal, W.
Hamil, M. P.
Hammer, W. W.
Hawes, D. R.
Hecht, R. H.
Houser, D. G.
*Heizer, O. J.
Kier, G. P.
Lange, F.
Lundy, L. T.
†Malcolm, F. A.
Macfadden, C. C.
Maxon, L. J.
McCoy, T. R.
Moore, C. A.
Morton, R. A.
Morrison, J. C.
Moss, S.
Naibert, W. F.
Patterson, S. S.
Pringle, G. A.
†Penniwell, G. W.
Reed, G.
Reidy, M. J.
Rule, R. W.
Schrader, E. A.
Schaffner, G. D.
Shane, C. N.
Tilton, C. T.
†Thompson, C. A.
Wait, T.
Waters, F. H.

* Irregular.
† Not in attendance.

DEPARTMENT OF PHARMACY.

SENIOR CLASS.

NAME.	RESIDENCE.
Ashford, George Washington	Homer, Neb.
Barr, Henry James	Vinton.
Benham, Louis Albert	Shelby.
Conry, William LeRoy	Waterloo.
Dabney, Maurice John	Oakland.
Delaney, Jerry C.	Milligan, Neb.
Dyhr, William	West Branch.
Hieber, Harvey George	Cedar Falls.
Junger, William Fred	Reinbeck.
LeFevre, Louis Kountz	Montrose.
Mittvalsky, Edward Charles	Cedar Rapids.
Nichols, Fred Claudius	Green Mountain.
Schaumloeffel, Marie Berenice	Ravenswood, Mo.
Schnier, John Valentine	Worthington.
Swan, Wallace Cantwell	Morning Sun.

JUNIOR CLASS.

NAME.	RESIDENCE.
Baker, Melvin Franklin	Eldora.
Bender, Arthur Clarence	Shenandoah.
Benesh, Emil	Vining.
Brady, Charles Francis	Cedar Falls.
Carroll, Mrs. Charles H.	Marcus, Wash.
Cash, William Frank	Underwood.
Collins, Denis Francis	Iowa City.
Cronin, Daniel Joseph	Ute.
Downs, Newton Lawrence	Pender, Neb.

NAME.	RESIDENCE.
Goodnow, Harvey Adelbert	West Union.
Grover, Robert Oswald	Central City.
Hart, Bert	Danbury.
Hughes, Wilber Curtis	Lewiston, Ill.
Kane, William P.	Deerfield.
Koltermann, Gustave Herman	Charles City.
Krabiel, William Clyde	Winterset.
Merckel, Carl Donald	Charles City.
Miller, Frederick William	Homestead.
Miller, William	Macedonia.
Murfin, Lewis Thomas	Ponca, Neb.
Nixon, Andrew Wallace	Hudson.
Opfer, John C.	Waukon.
Schulze, William Joseph	Decorah.
Selleck, Edwin Curtis	Onawa.
Severin, Alfred Louis	Cedar Falls.
Stansbury, Howard Erskine	Spencer.
Stotts, Orville David	Redfield.
Stump, Wilbur Henry	Toledo.
Welch, Arthur Brooks	Bloomfield.
Whisler, Ray Glen	Cairo.
Wise, Harley Louis	Fostoria.

SUMMARY.

Collegiate Department:		
Graduate Students	88	
Seniors	103	
Juniors	104	
Sophomores	137	
Freshmen	187	
Special	79	698
Law Department:		
Seniors	93	
Juniors	128	221
Medical Department:		
Seniors	2	
Juniors	22	
Sophomores	68	
Freshmen	84	
Special	6	182
Homœopathic Medical Department:		
Seniors	9	
Juniors	12	
Sophomores	21	
Freshmen	20	
Nurses	19	81
Dental Department:		
Seniors	35	
Juniors	35	
Freshmen	52	122
Pharmacy Department:		
Seniors	15	
Juniors	31	46
		1350
Deduct for names counted twice		67
		1283

UNIVERSITY ALUMNI ASSOCIATION.

President:

N. W. MACY, C. '73, L. '75 . . . . . Harlan

Vice Presidents:

W. L. EATON, L. '72 . . . . . Osage
CLARA REMLEY, C. '76 . . . . . Mason City
C. H. BURTON, C. '89, L. '95 . . . . . Iowa City

Secretary:

O. A. BYINGTON, C. '80, L. '81 . . . . . Iowa City

Treasurer:

CHARLES S. MAGOWAN, C. '84 . . . . . Iowa City

Executive Committee:

MRS. LOU PRESTON, C. '73 . . . . . Iowa City
W. L. BIERRING, M. '92 . . . . . Iowa City
B. F. SHAMBAUGH, C. '92 . . . . . Iowa City

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E. S. WHITE, C. '94 . . . . . Harlan
H. S. RICHARDS, C. '92 . . . . . Iowa City
E. RUSSELL SMITH, L. '95 . . . . . Fairfield

Railroad Secretary:

S. K. STEVENSON, C. '93 . . . . . Iowa City

All graduates of the University are invited to membership. The annual meeting occurs at 2 P. M. on Tuesday preceding Commencement and the banquet at 6 P. M. of the same day.

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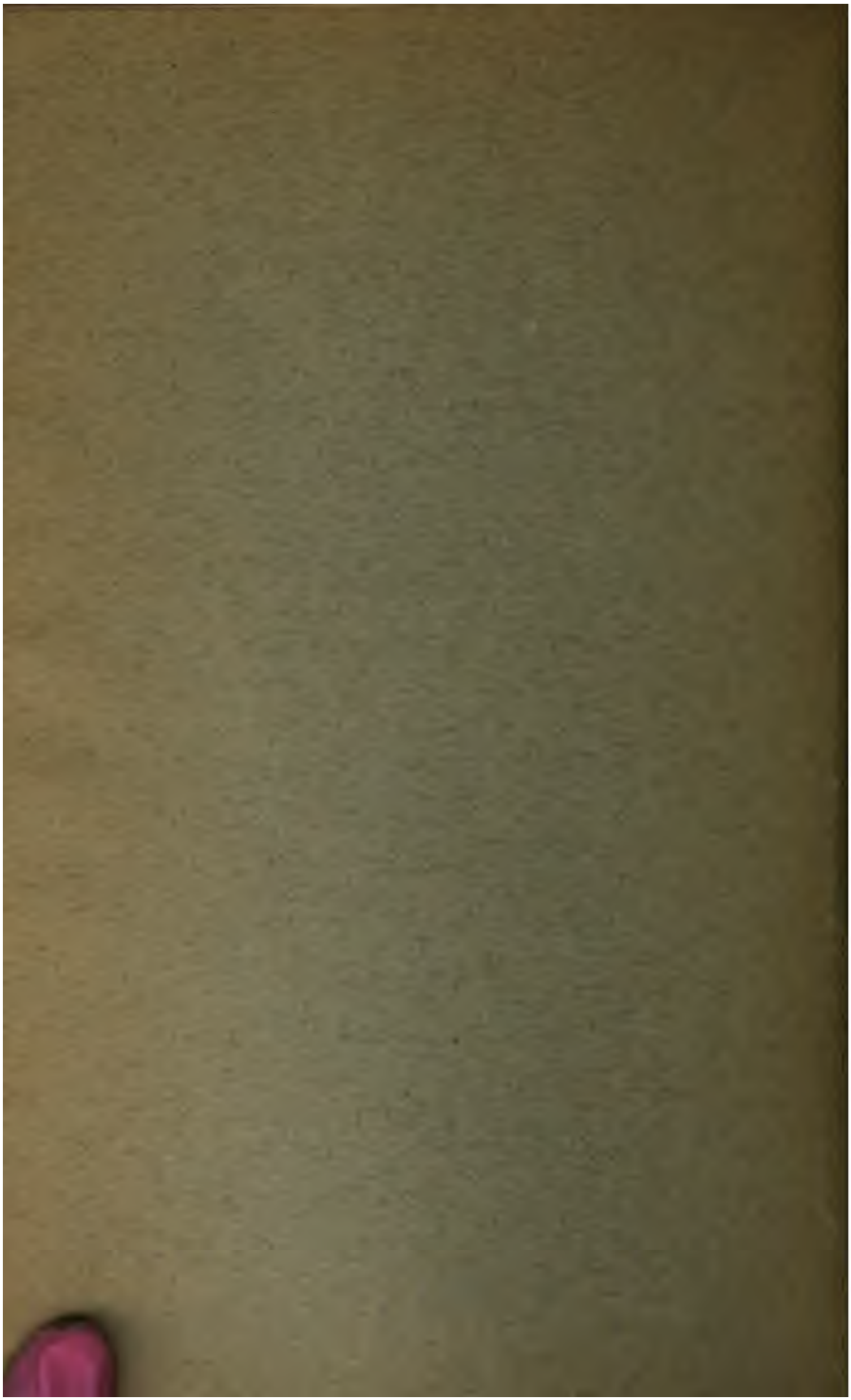

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